

# Recent Educational Developments in The World



J. C. AGGARWAL

RECENT  
EDUCATIONAL DEVELOPMENTS  
IN THE WORLD



AN INTRODUCTION TO WORLD EDUCATION

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**RECENT  
EDUCATIONAL DEVELOPMENTS  
IN THE WORLD**

**VOLUME I**

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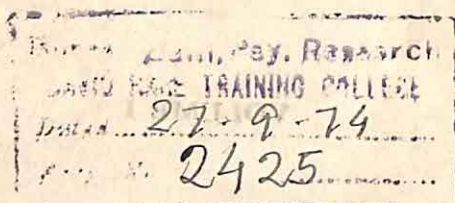
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## PREFACE TO THE SECOND EDITION

The revised edition of 'An Introduction to World Education' consists of three Volumes : Volume I 'Recent Educational Developments in the World', Volume II 'Unesco's Contribution Towards World Education' and Volume III 'Comparative Education'.

The material in the book has been freely drawn from Unesco publications and especially 'Unesco Features', 'Unesco Chronicle', 'Unesco Courier' and 'Prospects in Education'.

*New Delhi*  
*30th May, 1971*

J.C. AGGARWAL

## PREFACE

This book is intended to serve a two-fold purpose—first, to be useful to the students of the teachers' training colleges, second, to meet some of the needs of the educational planners, research workers and administrators.

The author is aware of the many pitfalls inherent in writing a book of this type. However, he has tried to present the subject matter in as clear and concise a manner as possible.

The material in the book has been freely drawn from Unesco publications and especially Unesco Features. An ample use has also been made of the educational literature published by the governments of the various countries.

The author is grateful to all those writers whose works he has consulted in preparing this book.

A particular word of gratitude is due to the Librarian of the Indian National Commission for Unesco and Shri Jagdish Lal, the Librarian of the Asian Institute of Educational Planning and Administration, New Delhi, for extending their full co-operation in procuring the latest material on the subject.

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## Education and Man's Development

Education has two essential functions : tradition and innovation. The first function implies the handing down of a heritage, the consolidation of the past, albeit a past which has been analysed or interpreted. The second function represents a factor for change. First of all, any active education worthy of the name challenges all existing realities and ideas. Instead of merely surveying the accepted ways of dealing with problems, it proposes new solutions, going deeper it develops critical attitudes and furnishes heuristic methods, that is to say methods of invention and discovery, which by changing the mental outlook bring to light problems in all the places where tradition showed only solutions.

As soon as we begin to consider the value of the content of education in relation to its objectives, it seems that it is very important to give special thought to the capacity for innovation, for that is in question. In many spheres and in many countries, a number of people are wondering whether education has not failed to keep up with the changes that are taking place in the world—firstly, in the world of knowledge and ideas which is evolving with ever increasing rapidity. We should therefore consider to what extent education is capable of changing itself so as to become adapted to the changes taking place in the world around it.

This inquiry is all the more justified in view of the fact that change is rendered inevitable by the requirements of socio-economic development. For a long time development was regarded purely as a matter of growth conceived as a mechanical progression—in other words, as an advance by mankind in one or more directions unaccompanied by any internal transformation of man and society. Today, however, there is an increasing awareness of the fact that development, whether of man in his social or in his universal aspect, essentially implies change and that without change there can be no growth. It follows that the contribution which education can make to the world consists in its ability to help man to change.

This raises a twofold, dramatic question : firstly, "Can education change itself?" and secondly, "Can education help to change mankind?" That is why, with due regard to all that is valuable and necessary in education's function of tradition, it seems essential that for the purposes of discussion that we should approach education from the twofold point of view of its capacity for internal renewal



and of its capacity to contribute to external renewal. What is needed is to concentrate on the malleability of education and the malleability of mankind and to see how the former can be of service to the latter. Education must change not only to keep pace with the constant varying of the present-day world but because it is the greatest factor making for change in man and because it is only through change that man can develop and thereby attain to his full stature as a human being.

The present *educational model* is undergoing radical revision, this revision cannot be solely technical. It must be ethical as well—indeed ethical above all. This for the very good reason that any educational model is at once the projection and the creation of a human model—which to be sure has no meaning save in ethical terms. There can be no theory of education which is not a theory of the purpose of man, whether in his social or his universal aspect, because education is the *praxis* which shapes to certain purposes the element of malleability implanted in man by nature and of contingency implanted in him by history. What are the purposes to which present-day education is shaping the malleability and contingency of contemporary man? Whence are they derived and whither do they lead? In the last analysis, this is everything and the rest is mechanism.

Whatever may be thought of the forms or even the exploitation of student protest, its great merit is that it has forced us adults to ponder over this question of purposes—for they are those of man himself. Many educators are alarmed by the range of this inquiry which necessarily covers both education and society—those twin mirrors—while politicians are irritated by its impertinence. Disregarding the politicians who in any case are not with us today, it may be said to the educators that far from recoiling in alarm, we must look these questions—however daunting, ill-formulated or shocking they may be—frankly and squarely in the face.

Long before they blazed out in the tumult of the campus, we cannot have failed to hear them in the inner recesses of our conscience as educators. For far too long now education has been blindly pursuing the enhancement of man's powers. It is high time that it concerned itself with the use of those powers not on behalf of his happiness—the word is too vague because it is so highly charged with subjectivity and Freud was right in saying that happiness is not a cultural value—but on behalf of his freedom and his dignity. Knowledge is power: of that there can be no doubt. But power does not necessarily mean achievement; it can also mean destruction or degradation both of oneself and of others. The world is strewn with ruins; and history from the earliest times right up to the present day is one long record of the criminal abuses of human power.

It is time that education, in reflecting on its purposes, brought man to himself. But what does "himself" mean? It means the

personality as an absolute in the sense that man is a being who must never regard either himself or his fellows as an object.

Obviously, this conversion cannot be brought about solely by the transformation of education even if this is carried through into its ethical dimension. There must be corresponding changes in the social order. But it is equally certain that only education can throw light on and prepare, explain and consolidate these social transformations, whatever they may be. We are at the beginning of what will no doubt be a long and complex process of radical educational revision which will pave the way for the invention of a new human model : a process from which societies and individuals will emerge transformed. Whatever may be the merit of these speculations there is one clear point on which we can agree at the outset : there are too many questions being raised at the present time about the purposes of education for us to fail to see in them a crisis of civilization rather than a mere mutation in technology. "Man", the poet has told us, "must be resuscitated".

(Extracts from the address of Rene Maheu, Director General, UNESCO, at an International symposium held at Paris from 16 to 20 February. UNESCO Chronicle, April 1970, Vol. XVI, No. 4.)



## Prospects for Lifelong Education

Education is lifelong. Every year, every month, every day step by step a person learns, feels the desire and is given the opportunity to learn. In the world now emerging no one knows what the morrow will bring. And so we must equip every man in every way and in every moment of his life to be the master of his fate, the captain of his destiny.

Lifelong education is in reality all of life. There is no sector where the effort to learn and train and develop the part of the individual involved is not possible. As Unesco's General Conference declared at its fifteenth session: "In industrialized and developing regions alike, the basic concept should be that of lifelong education embracing all levels of the educational systems, all forms of out-of-school education, and even all policies for cultural development. Unesco should help Member States, particularly by pedagogical research, especially in the fields of methods and curricula, and by perfecting educational structures and administration, in improving the quality of education so as to obtain the best possible yield from available resources. Lifelong education, the planning of which should be integrated into overall economic and social planning and which should be inspired by a spirit of participation, should contribute to the implementation of the Declaration of the Principles of International Cultural Co-operation."

### **Educational Objectives**

The concept of lifelong education forces a redefinition of educational objectives and brings us back to focus all education solely and singly on man, his growth and development. In primary and secondary education, the purpose will not be passing exams but the capacity of each pupil to learn and grow. In universities the aim will not be getting a degree and the wild scramble for grades but the ability of the undergraduate to know how and where to seek information and use it.

Libraries will be considered simply as one more source of information. In the business firm, co-operative and trade union, in the farm and factory, work and leisure will gradually cease to be an oppressive drag on the worker's monotonous daily existence but become part of a continuous process of living and learning. Thus the centre of all education, of all teaching and training, of all learning



becomes man—as child, as youth, as adult. There will be concern for individual abilities rather than with increasing production, with blazing new trails for civilization rather than treading wearily the old beaten paths, with satisfying one's own insatiable curiosity rather than over-specializing in one narrow field.

### **Educational Organization**

Lifelong education is introducing profound changes in the organization of education. First the planning of education has hitherto been restricted to school education because this sector has been susceptible to quantification. It has dealt with target figures of future or enrolled students, future or serving teachers, school building costs, estimates for books and equipment. It is a pity that the planners were defining education in terms of school education at a time when the mass media were blowing the educational doors wide open.

Educators were of course disturbed at what they<sup>o</sup> called the quantitative approach to education and its planning. Many kept insisting that it was the quality of education which was decisive for society and that behind all this facade of figures, parameters, manpower estimates and opportunity costs is the individual whose spirit cannot be quantified, whose mind cannot be measured and whose conscience is beyond mathematical equations. This of course does not mean that quality cannot be quantified, as otherwise quality becomes synonymous with vagueness.

Equally, for quite other reasons, the economist was aware of the partial nature of the planning of school education. For one thing, the opportunity cost concept forced the economist to avoid the temptation of the educational planner to restrict his vision to school education. One may cite Adam Smith's cutting commentary on literacy: the most essential parts of education, to read, write and count, can be acquired at so early a period of life that the greater part even of those who are to be bred to the lowest occupations have time to acquire them before they can be employed in occupations; or the Soviet economist Strumilin's careful computation of the comparative costs of adult and school education in their effects on the worker's productivity, or more recent computations of returns on school education and adult illiteracy in Venezuela.

The economist knows that in the pre-industrial and industrial system, there is necessarily a decreasing investment in education relative to growth in GNP. The demand in industry and agriculture for educated personnel is less than the supply of graduates from the schools. In technology, however, university enrolments are lower than demand. There is declining interest in part-time studies and further education. There is little demand for in-service training or the technical updating of workers, farmers and those employed in the services. But the economist also knows from his analysis that the key factor of economic growth in the coming post-industrial society will not be capital and labour but mass culture and education,



consumption and services, health care, trade and human contacts, recreation, leisure and co-operation. This means that in the society of the future, all our current dreary controversies as to whether investment in man is a concept virtually empty of theoretical content, whether it is capital saving or capital consuming, whether or not it is really consumption expenditure, will be a matter of interest only to the archivist. Investment in man will be at the heart of economic growth. The development of man will become an independent not a residual factor of economic progress. There will be no over-investment in human resources. All growth will depend essentially on the human factor—inventiveness, teaching, information, social participation, human welfare and cultural creation. Man will be master of his fate and lord of his universe.

In the meanwhile, educational planning must break through its traditional quantified school frame and cover all of education. The new definition of educational planning which emerged from the International Conference on Educational Planning meeting in Unesco House held in August, 1968, represents an important step forward for educational planners and administrators: "Educational planning can only be an effective instrument of comprehensive development if it contributes, through the choices which it makes possible, to a renewal of the education process. The latter should be conceived as a *permanent*—lifelong—process, and the confusion arising out of traditional identifications between education and school education should be resolved. Thus, for instance, participation in non-school education tends to increase, both in developing countries where certain types of community action can profitably replace formal education and in developed countries where the potentialities of individualized education—particularly programme learning—are being offered to increasing numbers. Further, education shall be *comprehensive*, reflecting the many aspects of development which it is called upon to serve."

Unesco's General Conference at its fifteenth session established this declaration as the directive for the future. Primary schools will thus become schools for the local community, second level schools—general, technical and agricultural—will function for twenty-four hours each day offering in-service education for workers, farmers and those in the services. The universities will provide a year-round programme so that all can go to college, full time, part time or by correspondence.

Thus, the concept of lifelong education breaks through the established compartmentalization of the educational system. There can no longer be antinomy between science and arts, the humanities and technology, general and vocational learning, utilitarian and non-utilitarian education, primary versus secondary, school versus adult literacy.

### **Adult Literacy**

Planning in this domain embraces both a selective approach



concentrating on large industrial and commercial concerns, public sector undertakings, intensive agricultural and other development projects, and social welfare programmes with a built-in literacy element, and a mass approach still using the concept of literacy derived from the idea of lifelong learning. The sorry record of earlier literacy programmes, based on romantic and abstract concepts of rights and justice and unrelated to man's real concerns, is only too well known.

It is when literacy is so sited in man—rural or urban—in his actual setting, when it speaks to him as a producer or consumer, involving him in the changing of his conditions and modes of life, when it is part of the global development of society and so enables him to participate in the community and control his life, that it becomes what Unesco has termed functional literacy. Such literacy is simply the application of the theory and practice of lifelong education.

At the international level, where statistics show that the number of illiterates is increasing daily, 52 countries requested the co-operation of Unesco in 1968 for establishing such functional literacy programmes, and projects of this kind in 13 countries are being aided by Unesco in co-operation with FAO and ILO and financed by the United Nations Development Programme.

### **Content of Education**

A general acceptance of the concept of lifelong education will call for drastic reform and restructuration of the curricula and programmes of study and training at all levels and in all forms of education. As all areas of knowledge are constantly changing and transforming, the content of education cannot even attempt to be encyclopaedic. It cannot aim at providing a ready-made system of knowledge. Education and training programmes based on acquiring pieces of knowledge will be self-defeating. The jack of all trades will not only be master of none, he will be a menace. Research on the frontiers of human intellect shows that while man's abilities can be expanded indefinitely, his ability to retain factual knowledge is limited. Does this leave no place for knowledge and information in a lifelong learning process? Certainly, but knowledge must be taught, information must be purveyed, along with the ability to retain and use it and along with the ability to acquire fresh information and use it purposively.

The implications for higher education as the domain no longer of an elite but of the masses are even more drastic and far reaching. Its programme content should revolve around the cultivation of abstract thinking attuned to various levels of reality, understanding of logical systems and cultivation of systems approaches and analysis. The scientific mind and scientific modes of thinking are more important than memorizing the findings of science. It is on today's pupils, their preparedness, creative abilities and mental dynamism



manifested throughout their lives that the progress of society will depend.

The concept of lifelong learning meets the explosion of knowledge and deluge of information by making education provide not a fixed sum of knowledge but a basis and technique for lifelong creation and inventiveness. Education must at all stages become self-education, so that with the tools acquired in school the adult will continue through life his education with all the means at his disposal—the library, mass media, camps, seminars, training institutes, etc.

## Conclusion

It is one thing to sketch out the implications of a revolutionary idea—the idea of lifelong education—but it is quite another to turn it into a practical programme. The development of such a programme requires long and sustained interdisciplinary research and the collaboration of pedagogues, economists, sociologists, psychologists, philosophers, administrators, scientists, engineers, architects, communication and management specialists. Such a task comes up against the inertia of society and the legacy of seemingly coherent cultures. In the end, it depends on man's inventiveness and decision to save and serve man.

For man is the epicentre of this idea to which adult education gave birth. And if man's purpose is to advance the limitless horizons of his mind and soul, there can be no interregnum, no hiatus in this upward, onward march. The importance of his life, then, is not measured by his successes and failures but by his constancy to truth which is the search. The secret of his life is not the adding of time to life but of life to time, not in the pursuit of happiness but in the happiness of pursuit.

(Extracts from the presidential address given by Malcolm S. Adiseshiah, Deputy Director General, UNESCO, at the Annual Conference of Indian Adult Education Association on 23rd December, 1968, in Pondicherry, India.)

## Lifelong Education

The term 'lifelong education' covers a very wide field. In some cases it is applied to strictly vocational education, that is, training and refresher courses in a particular technical skill. It may also cover much the same ground as adult education, taken in a much broader sense than training for a specific job though excluding the development of all facets of an individual's personality. But more and more frequently it is being applied to new activities and fields of research which are not included in the traditional notion of adult education, much less vocational training, and which express a desire for evolving a new style of education.

At the present stage of thinking and practice, lifelong education is a very complex notion which cannot as yet be clearly defined. We should perhaps attempt to systematize its various elements and show their interrelationship with one another. According to the first—probably the most widely accepted—meaning of the term, education does not end when the individual leaves school (whether primary, secondary or university) but continues throughout life. This interpretation of the educational process is reflected in what we call today adult education.

It might appear therefore that it is simply a natural tendency to give a new name to a form of education which in fact already has a long tradition. But one may discern in this context a less traditional element, setting it apart from the narrower concept of adult education as a means of making good the shortcomings of basic education. The latter coincides to a certain extent with the theories and practice of popular education and culture.

However, the use of the term 'lifelong education', is intended to embrace a much broader concept: the continuation of the educational process, without interruption, to fulfil the aspiration and develop the potentialities of each individual human being, and to meet the ever more pressing demands of a world in transformation. Everyone nowadays realizes that, in the present-day world where structures are constantly changing, the lives of individuals, communities or nations cannot be geared to any standard formula of education.

This first meaning of lifelong education is therefore a limited



concept, and research on new orientations is at present being carried on in many institutions, including Unesco.

If man can and should continue learning, training and improving his professional qualifications, developing his intellectual, emotional and moral potentialities, contributing more to his personal relationships as well as to the community at large, and if adult education is to provide adequate facilities to help him achieve these aims, then educational thinking and processes must undergo a radical transformation.

It is obviously impossible to maintain traditional systems of education when the needs they were designed to meet have changed. Since every man and woman is engaged throughout life in a continuing process of learning, the kind of education that is being provided today, especially for young children and adolescents, must be overhauled completely both in its content and in its methods. Up till now, the basic aim of primary, secondary and university education was dictated by the traditional view that life was divided into two distinct parts: a period of preparation and training, followed by a period of action.

In primitive societies, the young were prepared for adulthood by the elders or wise men of the community or tribe and those who had mastered various techniques. This preparation ended with a period of initiation, after which the young man or woman entered adult life and was expected to play his or her appropriate role.

In our own societies, we have created similar rites for this transition in the form of examinations and diplomas marking the end of training for adult life. After passing his final examinations, at 15, 20 or 25 years of age, a young man was considered ready for working life, equipped with the appropriate intellectual baggage, references, standards of behaviour, habits and customs to enable him to play a role in adult society for which his abilities and his social status more or less adequately fitted him.

Life was thus neatly divided into two parts and the aim of education was to provide the future adult with the attributes he would need to fill the various roles he might be called upon to play in life. As a result, the whole education system was designed to cram the pupils' heads with all kinds of facts, and they were supposed to draw on this accumulated capital as best they could to lead a satisfactory life. But if, on the contrary, man can and should continue to learn and educate himself throughout his life, there is no reason to overburden his brain as a child.

### Changing Role

The role of the school, in this perspective, changes completely. To start with, it should contribute as effectively as possible to real education. In a harmonious system of lifelong education, this only begins after the individual leaves school or university and undertakes



his own education, and when he possesses the necessary motivations to continue study and training. Instead of being essentially a process of acquiring knowledge, basic education becomes a kind of prelude. Rather than offer courses in different subjects, it should provide the future adult with the means of expressing himself and communicating with others. The main emphasis should be on mastery of language on the development of faculties of concentration and observation, on knowing how and where to obtain information and the ability to work with others. The very existence of a broad and vigorous system of adult education will have an impact on all educational thinking and practice, firstly in the university, then in secondary and primary school and beyond that in the family and the community in which it is applied.

According to a second interpretation of life-long education which is closer to the true nature of this concept, all educators and particularly those engaged in adult education must undertake a complete overhaul of all the different forms of education and training required by modern man in all the different stages of his existence. Each period of our lives in fact represents at once a unique and valuable experience and a preparation for future stages. This duality is true not only of childhood and adolescence but also of the early years of adult life, maturity as well as the periods later in life. Each phase of man's existence should be lived to the full and should contribute its part of experiences, pleasures and satisfactions in the long process by which he gradually comes to know himself through a series of revelations.

On the extent to which every individual benefits fully from each period of his life depends his preparation for subsequent periods. To live as if one had been granted some kind of reprieve is merely a form of escapism. Yet this is very often the case with children and adolescents. Schooling acts as a brake on their development and prevents them from leading the kind of life they should at that age, with the result that they develop a negative attitude towards education which seems to restrict their freedom, instead of being a source of joy and personal fulfilment. A truer understanding of life and its different phases leads to a much more comprehensive view of lifelong education, embracing far more varied activities than adult education which, however, will have a very important role to play. Since all aspects of education are interwoven in an organic whole, it would be illogical to introduce vital reforms in the first phase unless there is an active and well organized system of adult education.

Consideration must also be given to other less fundamental aspects of lifelong education, conceived as a process of learning which must meet the needs of each successive phase of life.

First, there can be no question of an age limit for education: Education is a way of life, or rather a way of being aware of what is happening in the world. Some individuals are alive to what is going on around



them, others pay no attention. There are people whose whole aim in life is the search for security ; others on the contrary are not only prepared to take risks but voluntarily seek adventure and tackle difficulties. The whole purpose of lifelong education is to make individuals aware of the world around them, to launch them into the stream of life, in contrast to the kind of sleepwalker's existence of those who, at some stage or other, have stopped learning and drifted into conformist habits of mind.

Secondly—and this is very important—the notions of failure and of success lose their significance. It goes without saying that in a system of education which finishes at a certain age and is marked by 'initiation rites' consisting of examinations, diplomas or other forms of selection, those who succeed are cut off from those who do not. Society is thus divided into two groups : the fortunate, on the one hand, and the unlucky or unacademic on the other, who thus find themselves labelled for life by often entirely fortuitous circumstances. But if, with the appropriate structures an individual is engaged in a continuous process of education and is constantly learning something new, then a failure is only relative. If he does not succeed in one particular venture, many other opportunities are open to him in which he can test his abilities. He does not become a failure, he merely has had one failure among others in his life ; in the same way, a success is also relative and only applies to one in a series of undertakings which may or may not prove successful.

When it is institutionalized, success may prove just as much of a constraint as failure, and in some cases even more detrimental. An individual who fails in a particular venture is forced to take stock, to start afresh, whereas an individual who succeeds—especially if his success sets him apart from his fellows—tends to believe that the rest of his life will be plain sailing. For those who are constantly starting something new in a process of lifelong education, success and failure are only relative notions and thus lose any absolute significance.

The aim is to increase each individual's possibilities of expressing himself on the intellectual, emotional, social and professional planes, as well as in relationships between the sexes, between parents and children, and so forth.

There are countless situations in which a man may succeed or fail, but the important thing is that he should have a positive approach to these situations, that he should be vigilant and inquiring, not a passive observer. Certainly, one cannot entirely rule out all selection : industrial and commercial firms or administrative enterprises, for example, are not prepared to recruit staff on trust but demand certificates and diplomas. In actual fact, therefore, there is a contradiction which cannot be ignored between the development of lifelong education and the practical necessity for selection. But in the main this is not a problem for educators, but one which must be solved by employers who will have to find their own means of recruiting the men and



women they need, on condition that this obligation for selection at a given moment does not have a backlash on general education, which is governed by other imperatives.

Moreover, it may be possible to develop systems where, even after selection, there are opportunities for an individual who has already qualified for an entered one profession to follow study courses for others and to be able to change from one to another. Facilities of this kind already exist in some socialist societies, and in certain countries no one may occupy a post of high political or social responsibility for more than a limited number of years. This practice might become more general, so as to favour a rotation which would mean constant revision in selection, providing new opportunities for those who give proof of their competence in their work, and a chance for employers to recognize the talents and abilities of their employees.

Another important consequence of lifelong education is that it will, to a far greater extent than traditional education, reveal the originality of each individual. Human nature is the same the world over, but every human being is unique; in the words of the philosopher: 'You cannot descend in the same stream twice'.

### Own Imprint

Each individual is to a certain extent aware of this need to develop his potentialities and live his life as fully as he can. Consciously or perhaps subconsciously, he strives to free himself from anonymity and to leave his own imprint on the contributions he makes to his environment, to his times and to the type of civilization of which he is a product. The objects he contributes only partially reflect and express his personality and cannot represent the rich and varied amalgam of elements which make him unique.

Education at the present time takes no account of this basic factor of human individuality. Under the present system, there is no time for it. Schooling is spread over a fixed span of years and ends at a given age, without taking account, for example, of the fact that individuals of equal intelligence and ability progress at varying rhythms: some may be in full possession of their faculties at the age of 20 while others may not reach this stage until they are 30 or even later. An important role is played in this process of depersonalization by examinations and diplomas. The criteria—very often arbitrary—on which they are based were established many years ago to meet the demands of a type of society of categories of employment temperaments and casts of mind that are by no means universal.

In school, the criterion is not the individual, with his biological, psychological, sociological, historical and geographical characteristics, but whether he is a good or bad pupil. These evaluations are very superficial and neglect the day-to-day realities and laws of individual development. In fact, an individual spends his whole life acquiring self-knowledge.



That this conquest is a lengthy process can best be seen in the works of great artists : Matisse, Picasso, Titian and Rembrandt are outstanding examples. Works painted by Rembrandt at the age of 30 reveal an artist of exceptional talent, and ability but the man himself is absent. It is only in the later works produced by Rembrandt after the age of 40 and to a greater degree towards the end of his life, that we find the painter and the man fully reconciled. The greater an individual's potentialities, the longer the time needed for their fulfilment. With few exceptions—for example, Mozart, Raphael and Watteau who attained their zenith at an early age—the story of Rembrandt is typical.

What is true for the lives of creative artists is true also, in substance, for all human beings. We are all involved in the great adventure of humanity. In each successive stage of life, through various trials, in relationships with others and in private reflections, man reveals his true originality, unless he is subjected to the tyranny of more forceful patterns such as those imposed in school. Only a small minority can adapt to the accepted—and very restrictive—intellectual pattern which does not take fully into account the real resources of the mind.

When lifelong education becomes a reality, it will be possible to offer greater scope to each individual human being, to be less ruthless and tyrannical and to provide for the needs of a greater diversity of people.

Through the process of lifelong education, each individual will be able to benefit from some of the outstanding advances in modern thought over the past 150 years, including such concepts as historicity, scientific thought and relativity.

By historicity, we mean an awareness that the elements of knowledge are not revelations, nor can philosophic reasoning be taken as facts ; that knowledge is a series of conquests but that all advances in knowledge are subject to revision ; a recognition of the contribution of past generations to present truths ; an ability to situate the ideas of an era or of an individual in the context of the evolution of ideas and of the instruments for perceiving and expressing them, and an awareness of one's own progress through a series of stages.

### **Historical Context**

This approach enables us to view our own very important era in its historical context and to decipher the historical character of any event. Up till now, education systems have neglected this dimension : the facts taught to young children—the future adults—are generally presented as revelations and are rarely situated in a historical context.

Secondly, there is the scientific approach, the spirit of discovery, of constant questioning. The scientist who undertakes an investigation does not know at the start what he will find. For him, the main interest lies not in gaining knowledge but, once he has discovered



a fragment of truth, in recognizing it as provisional and in proceeding on the basis of that discovery. In contrast to the dogmatic attitude, the scientific approach consists in never formulating a judgement without verifying the facts. It is diametrically opposed to the search for security, which refuses to study problems afresh, seeks to avoid risk, demands ready-made answers and evades fundamental questions.

Countless men and women are educated to go through life accumulating answers and basing their attitude on accepted opinions. This is the antithesis of the scientific spirit, which readily admits the possibility of risk, including that of being mistaken. Education should teach us to accept risks and to regard them as a blessing, rather than a hazard in life. Such an approach will only be possible if science is no longer merely a subject in the curriculum, and the scientific method is applied to all aspects of education.

Thirdly, the process of lifelong education must include the notion of relativity which is the natural consequence of the development of historicity and of the scientific approach. Since truth and reasoning are the products of a historical process and all knowledge is provisional and subject to constant revision and verification, the notion of the Absolute becomes singularly restricted. Education should systematically inculcate in each individual the idea that his beliefs, convictions, ideologies, his habits and customs are not universal patterns or rules applicable for all time and in any civilization or way of life. To understand and accept the relativity of all situations and viewpoints should be one of the principal aims of education. This means that differences should be regarded not merely as a factor to be taken into account but as a common source of wealth.

Lifelong education therefore can and must assimilate these essential conquests of modern thought and introduce them into the thinking and actions of each individual. Most of us still base our lives on archaic patterns; we have not yet succeeded in launching out in the spirit of modern intellectual adventure, research and challenge. Regretfully and unwillingly, we are carried along by the tide of events, striving vainly to slow down or swim against the current. Most people find reality unpleasant and are disorientated when their views and theories are contradicted by the course of events; they lose confidence in themselves when the customary responses are no longer valid. Due to lack of training, they are unprepared to rise to their full stature and devote all their energies to seeking new solutions. They do not seem to realize that the main interest in life lies in this search.

Through lifelong education, it will eventually be possible for everyone to acquire this mental faculty, this attitude towards life and truth. Compared with present adult education programmes, particularly in their more limited interpretation, this is obviously a



far richer and broader concept. It is an entirely new view and interpretation of the educational process and even—on a higher plane—of human destiny, which projects the notion of a continuous struggle for self-conquest as a substitute for that of allowing oneself to be lulled into a sense of false security. It is also a guide for future action, because the principles of lifelong education offer clear orientations for the educational reforms which must be made if such action is to be vigorous, intelligent and constructive.

Lastly, it is this concept of education which will enable man effectively to fulfil his destiny in the true spirit of modern thinking.

(By Paul Lengrand, Department for the Advancement of Education, UNESCO Secretariat. Reprinted from 'Prospects in Education', No. 2, 1969—A Quarterly Unesco Bulletin.)

## Signposts for the Education of Tomorrow

Experts from 23 countries agreed at a Unesco meeting held from February 16 to 20, 1970, in Paris that education was not meeting modern demands. The experts were selected by Unesco as private individuals from a wide range of countries and professions committing no education ministry and no university governors. Invited by Unesco's Director-General, M. Rene Maheu, to make a frank reflection in common on the problems of education, they turned the symposium into a kind of "brainstorming" session. Set speeches were abandoned and ideas flowed thick and fast, showing despite their wide range, a striking measure of agreement.

This agreement was particularly noticeable in the experts' analysis of the present crisis in education. Whether professor or student rebel, journalist or computer expert, Muslim, Catholic or Jew, nobody denied the reality of the crisis or maintained that present authority should simply reassert itself.

If all they found wrong now is put right, this is what the ideal education of the future might look like :

It will be a cradle-to-the-grave process, no longer concentrating on the early years "as if you could eat enough at breakfast to last the day", as one expert put it.

Its structures will not look the same. Formal education may well start earlier, for Soviet children already learn algebra at an age when other children learn only arithmetic ; the university, which is no longer the only form of powerhouse of knowledge, may not survive at all, but if it does it will certainly not be the terminal stage.

Television and other mass media, which are already stronger influences than schooling, will become allies in the business of learning.

Education will not, however, become an automated industry. Even when the technical problems of programmed learning have been solved and satellite-relayed TV is received everywhere, person-to-person contact will be developed. Teachers will be more important, not less.

Its aims will be different, concerned with society rather than



individuals. Education of individuals, experts at the Unesco Symposium were told, has been impossible since about 1880, when the scientific discovery and publication of one year exceeded what one person could absorb in a lifetime. Furthermore, education is now a human right which is universally demanded, not a privilege of the elite.

Education will move away from preparing pupils to fit into a slot in society, but will seek to make them feel they belong to the larger world family of which instant communication makes them aware. History, so far as it means teaching about national virtues, and geography, so far as it means teaching about "other" peoples, will change.

Education will cease to be neutral, presenting information and avoiding moral judgements. It will seek to be an ethical force, the strongest of its principles being social justice, the common demand of today's student revolt.

It will be a cooperative venture. Young people, who already make up a majority of world population, will be increasingly drawn into consultation on both aims and methods.

**Crisis of Education.** For Makoto Oda of Tokyo, a student leader, now a teacher and novelist, the crisis was political and social. Students in a movement he had founded to oppose the Vietnam war were now demanding the dismantling of the educational system. Why? Because they felt that the system aimed at perpetuating the present structure of society and that this structure was the true cause of the war. Accepting the positions education prepared them for meant accepting society and the continuation of the war.

This analysis found an echo in the exposition by Dr. James Perkins, director of the Center for Educational Enquiry in New York, of the "crisis of the new priorities". While the adult world remained concerned with a rising GNP and the maintenance of world peace by force if necessary, there had been a "glacial change" and the young were now more committed to greater social justice and to peace achieved through putting national ambitions in second place to the idea of the international community.

**Strangers in Their Own Community.** Father Cecilio de Lora, of Colombia, also found that the crisis lay more in what education imposed than in what it imparted. Developing countries were dependent countries and their educational values were economic aims imposed from outside which took no account of true cultural needs. Such education, he said, made people strangers in their own community—a point of view strongly supported by two African participants at the symposium, in the measured analysis of Professor Joseph Ki-Zerbo of Upper Volta's Ministry of Education and in the more passionate plea of Miss Fatou Sow, a young and attractive sociologist from Senegal, for an education that was not "completely exterior", both in language and in habits of thought.



This idea of the alienating effect of education was taken up by many of the participants—by the Arab who said that “modern man is lonely”, by the Unesco expert who pointed to the fragmentation of man through the partial explanations provided by psycho-analysis, economics, politics and other views of humanity, by the Nigerian who said that the crisis was of lost identity, and by the Japanese.

But while these speakers stressed that the task of education is to find a new human model to aim at, others had doubts about its power to make moral values felt. This point was made by Sister Ghislaine Roquet, headmistress of the College Basile Moreau in Montreal, a Holy Cross nun whose “habit” included an attractive hair-do and a smart two-piece suit. It was precisely those young people, she said, who had acquired some ethical values in their education who did not “fit in” in the modern age, the hallmark of which seemed to be hypocrisy. She had plenty of allies. A young Argentinian psychiatrist, Dr. Maria Ines Gallardo, said that it was the teaching of impracticable ethics which had produced a reaction against the teachers, while an Indian and a Briton joined forces to note the difference between what was preached in school and what was practised outside.

Professor Zwi Werblowsky, an Israeli theologian, made the point that what was new in the student revolt was that when the young talked of morality, they meant business, not empty theory. And Professor Richard Hoggart, who had recently taken up his post at Unesco as Assistant Director-General for Social Sciences, Human Sciences and Culture, joined the discussion to point to the evidence of the so-called “sexual revolution”. Young people who rejected traditional sexual morality were not necessarily being more promiscuous than their parents, he said. What they were doing was rejecting “the Puritan work ethic”, the demand for people to fit in and conform. This could be seen in their vocabulary: their interest was in what was “real”, “authentic” or “true” in their own experience.

**Science: Enemy or Ally?** For Professor Roy Shaw, Director of Adult Education at Britain's Keele University, myths still have their role to play in the life of the human being, and there was eager discussion on this point, especially since there was evident agreement with speakers, who pointed out that science itself could be a superstition, and with others, who maintained that the myth of science increased the individual's feeling of helplessness and inability to influence his own destiny.

The technological demands of society, however, are likely to ensure that science goes on moulding education in the future. But a probable and apparently achievable aim is an end to the divorce between science and human studies. Dr. Helmar Frank, computer expert from the Institute for Cybernetics in Berlin was sure this could be done if the disciplines borrowed each other's approach and particularly if increasing use were made of mathematical methods in the human sciences.



Certainly science will be an ally in the process of education, with an increasing use of technology to produce teaching aids.

Dr. Shaw forecast that Britain's "Open University", in which the mass media will be used to educate those who cannot attend a residential university, would be a pattern for other countries, while Unesco experts reported that the experimental programme of educational television inside India in which Unesco was co-operating was a promising venture which might yet revolutionize the approach to problems of mass education.

Certainly the concept of life-long education received overwhelming confirmation at the symposium. This, many participants urged, would not only provide mobility of skills in the fast-changing society of today but would also help to close the generation gap.

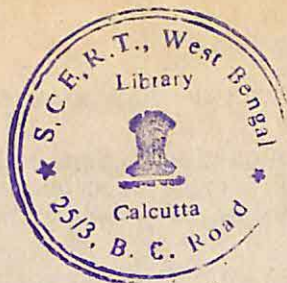
Turning back to the question of whether education could change society, the consensus seemed to be that education was likely to recover its moral aims and that the concept of human rights would be the unifying force. In this movement, the young people would play an active part because nobody could tell what the needs would be 40 years from now and the continuous participation of youth would provide flexibility.

(Adapted from UNESCO Features, No. 570, March 1, 1970.)

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## Education : But for Whom ? ...and How ?

As this century draws to a close, the developing countries face their biggest challenge : how to find the quickest short cut to close the gap between themselves and the industrially developed nations.

The development of science and technology certainly appears to be the best and most effective way to bring this about. Man, with his capacity for planning, organization and innovation, will be the chief driving force for this radical transformation.

This has been true at all times and in all countries. Studies in Washington show that even more important than investment, the major factor for expansion in the United States since 1925 has been the education and training of men and women.

But in trying to apply this to the developing Third World we are immediately faced by a host of situations which though they may appear independent one of the other are in reality closely interlinked.

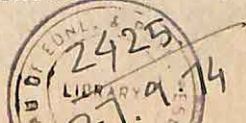
The French sociologist Jean Fourastie has rightly said that "A child whose life has been dominated by a fanatical or highly emotional upbringing, or more important by the belief in magic and other misguided tenets, will in all probability find it much harder to understand the methods of experimental science much less to apply them".

The Director-General of Unesco, Rene Maheu, recently declared : "The absence of intellectual stimulation arising from a lack or insufficiency of education... inevitably results... in a slowing down of the mental process. We know, furthermore, that forms of mental retardedness can no longer be overcome if certain learning processes... have not been mastered at an appropriate age."

The U.N. Advisory Committee on the Application of Science to Development reports : "If the levels of teaching in the majority of the developing countries cannot be considerably improved and raised so that the appreciation of modern science and technology becomes a major factor, there is little chance of science and technology being effectively applied in these countries."

We thus see that the logical conclusions to be drawn are these : without short cuts the developing countries cannot possibly catch up ;

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without the application of science and technology no short cuts are conceivable ; and without education the application of science and technology is impossible. So without education there can be no short cuts.

But that is not all. The question that immediately comes to mind is : education, fine, but for whom, and how ?

For the past 20 years, the nations of the Third World—both the governments and the people—have launched out into a vast fight to overcome illiteracy and raise their educational level. Three entire continents have been caught up in the fever.

In 1960, the governments of Asia adopted the now-famous “Karachi Plan” which foresaw seven years of compulsory primary schooling for all children by 1980.

In 1961, African Ministers of Education agreed to an ambitious programme with three main objectives : six years’ compulsory education for all African children by 1980 ; entry of 20 per cent of primary school children into secondary schools ; a university enrolment of 300,000 students.

The countries of Latin America followed suit in 1962 with their own plan to provide six years of primary schooling for all children throughout the continent by 1970.

Education budgets in the Third World have thus spiralled upwards at a dizzy pace—since 1960 about twice as fast as the increase in national income.

The effort made by the less well off countries has been and remains today so intense that most of them, despite their poverty, devote a higher proportion of their national income to education than do the developed countries. The figure is often as high as 25 per cent and sometimes even higher, compared, for example, with France’s 17 per cent.

Expenditure on education in all these countries has risen faster than other budget spending. It has, in fact, been pointed out that public funds devoted to education cannot go on much longer increasing faster than those earmarked for other national needs without jeopardizing government targets in other fields.

And here a difficult decision must be faced : the choice between more schools and fewer hospitals, factories, fertilizers, roads and dams, or fewer schools than planned and more hospitals, factories, fertilizers, roads—and illiterates.

Education certainly, but for whom ?

In their attempt to respond both to the intense desire for learning and to the need for education as a means to progress, the governments of the three “hungry continents” have adopted various solutions which can be roughly divided into two groups.



In the first group of countries, essentially the African countries, primary education has been made available to all. Since the number of qualified student teachers leaving the training colleges is insufficient to deal with such a situation, use is made of relatively unqualified "monitors"—pupils who failed the secondary school entry examination or who simply hold a primary school leaving certificate.

Thus in the Ivory Coast, for example, only 600 of the 7,500 primary school teachers hold diplomas, while the proportion of "monitors" in primary education elsewhere in French-speaking Africa is between 70 and 80 per cent, and as high as 90 per cent in Chad.

The result, in certain countries, is that five years after their primary schooling these so-called literate young men and women have once again become illiterates.

Broadly speaking, the system works as follows. The "monitor" has his class of 50, 60, 80 or even 100 children recite in chorus from a textbook, whose contents they scarcely understand. Since selection for promotion to a higher grade is stiff, pupils who do not succeed stay on in the lower grade for a second, third and sometimes even a fourth year before finally dropping out.

They form what specialists call "the wall", and progressively paralyze an already weak educational system. As the pupils chant their daily lessons, "the wall" forms a kind of chorus, reducing to silence the more recent arrivals, even if these children are more gifted. On average only 10 to 20 per cent of the pupils in these classes of 100 children manage to pass into the next grade without staying on for a second year.

The educational wastage is consequently enormous. Mr. Amon Tanoh, Education Minister of the Ivory Coast, has stated that "out of 10,000 children entering primary school in any given year, 3,900 reach the next grade, more than half of this number after remaining in the lower grade for a second or third year."

About 30 per cent of the initial group reach the first-year of the intermediate classes and about 20 per cent the second year, most of them after seven, eight or ten years at school. Of the 10,000 who entered the first grade, only 1,585—less than one-sixth—obtain their primary school leaving certificate.

Despite the crushing financial burden shouldered by these needy countries, the returns are very low.

The second group of countries can be said, with a few notable exceptions, to take in Asia, Latin America and the Middle East. Here the educational system works quite differently. A large proportion of children are still not accepted for primary school education, but the great majority of those who are finally pass out with a certificate of secondary education.

For these privileged children education starts at the age of 6



and finishes at 18. Students pass without much difficulty from one grade to the next, and the final certificate at the close of this easy-going school life is generously awarded.

In this second group of countries the dominant factor is obviously the extension of secondary education. In Mexico, primary education has increased by about 50 per cent since 1955, while secondary education has risen by 300 per cent. Similar trends are to be seen in several Asian countries. Educators call this type of educational system "porous" or "open".

A Teheran university professor has this to say about it: "The quality of education is worse than weak. Secondary schools accept all candidates, even the most mediocre. I know teachers with 70 students or even more, who become so discouraged that they have given up teaching their classes. University entrants have been so badly taught that I have even seen students writing out their English language lessons phonetically in Arabic script. With such an open secondary education we will never form an active elite."

However harsh the conclusion, it would be wrong to conceal it: whether because of educational "wastage" or the "porousness" of school systems, education in the Third World today is turning out few teen-agers who tomorrow will be able to work for the development of their homelands, and even fewer who will be able to take full advantage of the possibilities offered by science and technology.

Education certainly, but how?

How has this situation come about?

First there has been the population explosion, the effects of which were calculated either inaccurately or not at all. The result has been a general rise in school enrolment. In Mali, for example, ten per cent of children aged between 6 and 14—a total of 68,000—went to school in 1961. Three years later, in 1964, the proportion of the same age group in school was still ten per cent—but the figure had almost doubled, to 113,000.

Since Algeria's independence in 1962 the number of pupils has more than doubled in the primary schools, from 600,000 to 1,400,000; more than tripled in the secondary schools, from 35,000 to 110,000; and increased more than ten times in higher education, from 600 to 7,000. What budget could be expected to support such a spiral indefinitely and at the same time to provide for the training of qualified staff at all levels?

The second factor has been a reversal of the process by which education has extended in the past. Up to now, whether in Europe, the United States, the Soviet Union or Japan, industrialization has always preceded education, even in periods when the birth rate fell.

In today's developed countries there were for a long time more factories than schools, and industry financially supported the education which was to provide it with urgently needed qualified workers. Yet



even so it took Europe more than a century in this way to provide primary education for all its children.

In the developing countries, however, schools are opening before the factories in a period when the birth rate is increasing and when man's knowledge—particularly in the fields of science and technology—is growing twenty, fifty, or a hundredfold. Difficulties as serious as the problem we are considering here were bound to follow once the decision had been made to launch such an ambitious programme as the introduction of universal education within 20 years.

Do these difficulties mean that the programme must be abandoned and all hope of its achievement given up? Certainly not. Should the developing countries, then, base their approach on the European model and wait another century before the children of the three continents can find their place in school? Even less so: imitation would be no solution. Education remains a basic necessity, but the experience of recent years puts the question into a new perspective: "for whom and how?"

The essence of the solution is to link quantity and quality, and to find short cuts within the education systems themselves.

The developing countries are now fully aware of the pitfalls into which their early enthusiasm led them, but they are not giving up in despair. They are facing the problem squarely and courageously.

Several States have already abandoned the principle of eight years' obligatory schooling. Laos has reduced the period to three years. Dahomey has decided not to increase the number of pupils at its primary schools over the next few years.

The government of Tanzania has agreed to restrict the number of children receiving schooling to 49 per cent, the level attained in 1964. George Skorov, the Soviet economist, and formerly a specialist at the International Institute for Educational Planning, set up by Unesco, has commented: "This was a very difficult political decision because it means that half of each age group will help to swell the ranks of the illiterate, who already represent 85 per cent of men and 96 per cent of women over the age of 15."

Morocco envisages another solution: to accept an increasing number of six-year-olds but to eliminate progressively the less gifted.

Algeria has decided to prune the final primary grades of second and third-year stayers by imposing an age limit of 13 for secondary school entry.

Nigeria, in an attempt to raise the quality of her secondary education, is to allow only 15 per cent of those who have finished their primary education to go on to secondary schools: last year 1,000 out of 3,000 candidates were admitted.

In Algeria over the same period, 22 per cent were admitted compared with 70 per cent the previous year. It is interesting to note, in



passing, that this approaches the figure in France in 1939, when 20 per cent of children were in secondary schools.

Finally there has been a major move to solve the essential problem of improving the qualification of teaching staff: Algeria, Ivory Coast and Dahomey have stopped recruiting "monitors". Today only certificate-holders are admitted as teachers in these countries. This is the same decision that France took in the nineteenth century for its primary education.

Already a start is being made to answering the question: "education, but for whom?"

At the request of numerous governments, Unesco has replied to the second part of the question—"education, but how?"—by concentrating much of its effort on the improvement of the status and professional qualifications of teachers.

In Latin America, Unesco, in association with the universities of Sao Paulo (Brazil) and Santiago (Chile), has trained 400 candidates in educational administration and educational and vocational guidance. It has also sent experts to work at the continent's five major teacher training colleges—Pamplona (Colombia), San Pablo del Lago (Ecuador), Jinotepe and San Marcos (Nicaragua), and Tegucigalpa (Honduras). In two years 1600 trainee teachers have taken experimental courses at the colleges using new methods which will in future be extended throughout the rest of these countries.

Unesco has also helped to organize 40 study courses and round table discussions aimed at improving teaching methods and at providing teachers in Bolivia, Colombia, Ecuador, Salvador, Guatemala, Haiti, Nicaragua, and Peru with opportunities for in-service training. At the Inter American Centre in Venezuela, problems affecting teaching in rural areas have been studied with Unesco's help.

In Africa, Unesco and the U.N. Development Programme have helped to set up teacher training colleges in Mali, Nigeria, Ivory Coast and the Congo; and some 30 African countries benefit from the advice of Unesco specialists.

The necessity for finding short cuts within the educational system is one of the themes taken up by the United Nations Consultative Committee on the Application of Science and Technology to Development. It is also a matter of concern to the developing countries themselves, and a major preoccupation of Unesco.

As Prof. Thomas Balogh, of Oxford University, has pointed out, to imitate blindly the systems practised in the industrially developed part of the world would be at once an error and a danger.

In this connection, and as part of a pilot project to explore new methods for teaching physics best suited to the needs and teaching situation in Latin America, Unesco brought together for one year 26



teachers from universities and pedagogical institutes in eight Latin American countries. These specialists compiled five programmed instruction texts, eight inexpensive laboratory kits, and 12 short silent films as well as a half-hour sound film as part of the course on "The Physics of Light".

A similar pilot project for chemistry teaching in Asia has been set up under Unesco's auspices, and others are under way in Africa on the teaching of biology and in the Arab States on mathematics.

Increasingly important is the work of other U.N. Specialized Agencies, among them the Food and Agriculture Organization, the World Meteorological Organization, the World Health Organization and the International Labour Organization, who are multiplying their efforts, whether in agriculture or meteorology, medicine or the training of qualified workers, to raise the standards of all forms of education in the impoverished countries.

But these combined efforts, even with the help of bilateral aid programmes now operating between many countries, do not meet even half the present needs.

By 1980, the school population of the Third World will have risen from its present total of 400 million to 600 million. It has also been estimated that if these countries are to attain the point of economic "take-off", they will need 900,000 semi-skilled technicians (four times as many as today) and 600,000 engineers and scientific specialists (compared with 150,000 today), not to mention agronomists, administrators, accountants or doctors.

Where is the capital to be found to train teachers and educate children, to build schools and universities? It is abundantly clear that unless the more prosperous industrialized nations make a greater effort in this respect, the developing nations will not begin to free themselves of their impoverishment by 1980. The gap between developed and developing countries will remain. Inevitably the first step towards closing that gap is to raise the level of education.

In 1967, Robert McNamara, at that time U.S. Secretary of Defence, and today President of the International Bank for Reconstruction and Development, summed up the problem of the three gaps—economic, technological and educational—when he declared :

"If the wealthy nations of the world do not do more to close this sundering economic split which cleaves the planet, none of us will ultimately be secure. The seismic social shocks will reach us all, and with them will come the inevitable tidal waves of violence. The widening economic chasm between the rich nations and the poor nations can be as threatening to our security as the emergence of nuclear weapons. It is as simple—and it is as sobering—as that."

(By Pierre R ndiere, French Writer and Journalist, Published in UNESCO Courier, January 1970.)



## Declaration of the Rights of the Child

The United Nations General Assembly, on 20th November, 1959, unanimously adopted and proclaimed a Declaration of the Rights of the child, setting forth these rights and freedoms which the international community has agreed every child, without any exception, whatsoever, should enjoy. The full text of the United Nations Declaration is reproduced here.

### **Preamble**

Whereas the peoples of the United Nations have, reaffirmed their faith in fundamental human person and have determined to promote social progress and better standards of life in larger freedom ;

Whereas the United Nations has, in the Universal Declaration of Human Rights, proclaimed that everyone is entitled to all the rights and freedoms set forth therein, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status ;

Whereas the child, by reason of his physical and mental immaturity, needs special safeguards and care, including appropriate legal protection, before as well as after birth ;

Whereas the need for such special safeguards has been stated in the Geneva Declaration of the Rights of the Child of 1924, and recognized in the Universal Declaration of Human Rights and in the statutes of specialized agencies and international organizations concerned with the welfare of children ;

Whereas mankind owes to the child the best it has to give ;

Now, therefore,

The General Assembly Proclaims

This Declaration of the Rights of the Child to the end that he may have a childhood happy and enjoy for his own good and for the good of society the rights and freedoms herein set forth, and calls upon parents, upon men and women as individuals, and upon voluntary organizations, local authorities and national governments to recognize these rights and strive for their observance by legislative



and other measures progressively taken in accordance with the following principles :

### **Principle 1**

The child shall enjoy all the rights set forth in this Declaration. Every child, without any exception whatsoever, shall be entitled to these rights, without distinction or discrimination on account of race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status, whether of himself or of his family.

### **Principle 2**

The child shall enjoy special protection, and shall be given opportunities and facilities, by law and by other means, to enable him to develop physically, mentally, morally, spiritually and socially in a healthy and normal manner and in conditions of freedom and dignity. In the enactment of laws for this purpose, the best interests of the child shall be the paramount consideration.

### **Principle 3**

The child shall be entitled from his birth to a name and a nationality.

### **Principle 4**

The child shall enjoy the benefits of social security. He shall be entitled to grow and develop in health ; to this end, special care and protection shall be provided both to him and to his mother, including adequate pre-natal and post-natal care. The child shall have the right to adequate nutrition, housing, recreation and medical services.

### **Principle 5**

The child who is physically, mentally or socially handicapped shall be given the special treatment, education and care required by his particular condition.

### **Principle 6**

The child for the full and harmonious development of his personality, needs love and understanding. He shall, wherever possible, grow up in the care and under the responsibility of his parents, and, in any case, in an atmosphere of affection, and of moral and material security ; a child of tender years shall not, save in exceptional circumstances, be separated from his mother. Society and the public authorities shall have the duty to extend particular care to children without a family and to those without adequate means of support. Payment of State and other assistance towards the maintenance of children of large families is desirable.



**Principle 7**

The child is entitled to receive education, which shall be free and compulsory, at least in the elementary stages. He shall be given an education which will promote his general culture, and enable him, on a basis of equal opportunity, to develop his abilities, his individual judgement, and his sense of moral and social responsibility, to become a useful member of society.

The best interests of the child shall be the guiding principle of those responsible for his education and guidance ; that responsibility lies in the first place with his parents.

The child shall have full opportunity for play and recreation, which should be directed to the same purposes as education ; society and the public authorities shall endeavour to promote the enjoyment of this right.

**Principle 8**

The child shall, in all circumstances, be among the first to receive protection and relief.

**Principle 9**

The child shall be protected against all forms of neglect, cruelty and exploitation. He shall not be the subject of traffic, in any form.

The child shall not be admitted to employment before an appropriate minimum age ; he shall in no case be caused or permitted to engage in any occupation or employment which would prejudice his health or education, or interfere with his physical, mental or moral development.

**Principle 10**

The child shall be protected from practices which may foster racial, religious and any other form of discrimination. He shall be brought up in a spirit of understanding, tolerance, friendship among peoples, peace and universal brotherhood, and in full consciousness that his energy and talent should be devoted to the service of his fellow men.



## Convention Against Discrimination in Education

### **Adopted on 14-12-60**

The General Conference of the United Nations Educational, Scientific and Cultural Organization, meeting in Paris from 14 November to 15 December 1960, at its eleventh session,

Recalling that the Universal Declaration of Human Rights asserts the principle of non-discrimination and proclaims that every person has the right to education,

Considering that discrimination in education is a violation of rights enunciated in that Declaration,

Considering that, under the terms of its Constitution, the United Nations Educational, Scientific and Cultural Organization has the purpose of instituting collaboration among the nations with a view to furthering for all universal respect for human rights and equality of educational opportunity,

Recognizing that consequently, the United Nations Educational, Scientific and Cultural Organization, while respecting the diversity of national educational systems, has the duty not only to proscribe any form of discrimination in education but also to promote equality of opportunity and treatment for all in education,

Having before it proposals concerning the different aspects of discrimination in education, constituting item 17.1.4 of the agenda of the session,

Having decided at its tenth session that this question should be made the subject of an international convention as well as of recommendations to Member States,

Adopts this Convention on the fourteenth day of December 1960.

### *Article 1*

1. For the purpose of this Convention, the term "discrimination" includes any distinction, exclusion, limitation or preference which, being based on race, colour, sex, language, religion, political or other

opinion, national or social origin, economic condition or birth, has the purpose or effect of nullifying or impairing equality of treatment in education and in particular :

- (a) Of depriving any person or group of persons of access to education of any type or at any level ;
- (b) Of limiting any person or group of persons to education of an inferior standard ;
- (c) Subject to the provisions of Article 2 of this Convention, of establishing or maintaining separate educational systems or institutions for persons or groups of persons ; or
- (d) Of inflicting on any person or group of persons conditions which are incompatible with the dignity of man.

2. For the purposes of this Convention, the term "education" refers to all types and levels of education, and includes access to education, the standard and quality of education, and the conditions under which it is given.

#### *Article 2*

When permitted in a State, the following situations shall not be deemed to constitute discrimination, within the meaning of Article 1 of this Convention :

- (a) The establishment or maintenance of separate educational systems or institutions for pupils of the two sexes, if these systems or institutions offer equivalent access to education, provide a teaching staff with qualifications of the same standard as well as school premises and equipment of the same quality, and afford the opportunity to take the same or equivalent courses of study;
- (b) The establishment or maintenance for religious or linguistic reasons, of separate educational systems or institutions offering an education which is in keeping with the wishes of the pupil's parents or legal guardians, if participation in such systems or attendance at such institutions is optional and if the education provided conforms to such standards as may be laid down or approved by the competent authorities, in particular for education of the same level ;
- (c) The establishment or maintenance of private educational institutions, if the object of the institutions is not to secure the exclusion of any group but to provide educational facilities in addition to those provided by the public authorities, if the institutions are conducted in accordance with that object, and if the education provided conforms with such standards as may be laid down or approved by the competent authorities, in particular for education of the same level.



*Article 3*

In order to eliminate and prevent discrimination within the meaning of this Convention, the States Parties thereto undertake :

- (a) To abrogate any statutory provisions and any administrative instructions and to discontinue any administrative practices which involve discrimination in education ;
- (b) To ensure, by legislation where necessary, that there is no discrimination in the admission of pupils to educational institutions ;
- (c) Not to allow any differences of treatment by the public authorities between nationals, except on the basis of merit or need, in the matter of school fees and the grant of scholarships or other forms of assistance to pupils and necessary permits and facilities for the pursuit of studies in foreign countries ;
- (d) Not to allow, in any form of assistance granted by the public authorities to educational institutions, any restrictions or preference based solely on the ground that pupils belong to a particular group ;
- (e) To give foreign nationals resident within their territory the same access to education as that given to their own nationals.

*Article 4*

The States Parties to this Convention undertake furthermore to formulate, develop and apply a national policy which, by methods appropriate to the circumstances and to national usage, will tend to promote equality of opportunity and of treatment in the matter of education and in particular :

- (a) To make primary education free and compulsory ; make secondary education in its different forms generally available and accessible to all ; make higher education equally accessible to all on the basis of individual capacity ; assure compliance by all with the obligation to attend school prescribed by law ;
- (b) To ensure that the standards of education are equivalent in all public educational institutions of the same level, and that the conditions relating to the quality of the education provided are also equivalent ;
- (c) To encourage and intensify by appropriate methods the education of persons who have not received any primary education or who have not completed the entire primary education course and the continuation of their education on the basis of individual capacity ;
- (d) To provide training for the teaching profession without discrimination.



*Article 5*

1. The States Parties to this Convention agree that :

- (a) Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms ; it shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace ;
- (b) It is essential to respect the liberty of parents and, where applicable, of legal guardians, firstly to choose for their children institutions other than those maintained by the public authorities but conforming to such minimum educational standards as may be laid down or approved by the competent authorities and, secondly, to ensure in a manner consistent with the procedures followed in the State for the application of its legislation, the religious and moral education of the children in conformity with their own convictions ; and no person or group of persons should be compelled to receive religious instruction inconsistent with his or their convictions ;
- (c) It is essential to recognize the right of members of national minorities to carry on their own educational activities, including the maintenance of schools and, depending on the educational policy of each State, the use or the teaching of their own language, provided however :
  - (i) That this right is not exercised in a manner which prevents the members of these minorities from understanding the culture and language of the community as a whole and from participating in its activities, or which prejudices national sovereignty ;
  - (ii) That the standard of education is not lower than the general standard laid down or approved by the competent authorities ; and
  - (iii) That attendance at such schools is optional.

2. The States Parties to this Convention undertake to take all necessary measures to ensure the application of the principles enunciated in paragraph 1 of this Article.

*Article 6*

In the application of this Convention, the States Parties to it undertake to pay the greatest attention to any recommendations hereafter adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization defining the measures to be taken against the different forms of discrimination in education and for the purpose of ensuring equality of opportunity and treatment in education.



*Article 7*

The States Parties to this Convention shall in their periodic reports submitted to the General Conference of the United Nations Educational, Scientific and Cultural Organization on dates and in a manner to be determined by it, give information on the legislative and administrative provisions which they have adopted and other action which they have taken for the application of this Convention, including that taken for the formulation and the development of the national policy defined in Article 4 as well as the results achieved and the obstacles encountered in the application of that policy.

*Article 8*

Any dispute which may arise between any two or more States Parties to this Convention concerning the interpretation or application of this Convention, which is not settled by negotiation shall at the request of the parties to the dispute be referred, failing other means of settling the dispute, to the International Court of Justice for decision.

*Article 9*

Reservations to this Convention shall not be permitted.

## Current Priorities in Education in USA

The American scene is characterized by a unique emphasis and focus on education. This is good, for democracy, American style, can survive and develop only through an educated citizenry. Through individual and group action generated at local levels and through support and expansion created at State and national centres, the future of education in the U.S. looks promising. However, if America is to realize fully the worthy educational goals it has set, careful thought and planning must be exercised.

On every hand, these questions arise : What will children and youth need most if they are to cope successfully with the problems of a yet unknown technological age ? And, how can children be reared today so that they will be strong and ready for an unpredictable and strange tomorrow ? From many quarters, including some educational, the very loud and immediate response has been : more education, especially, more mathematics, science, modern languages, and reading instruction through pre-school programmes. Add to this the plea for increased home-work, higher standards, and so on through endless minutia, and one will have the answer proposed by many self-appointed authorities for the problems of a coming generation. Many of these ideas may represent true needs. However, merely adding more of anything to the school curriculum will not, in itself, give the needed preparation for life in the world of the immediate tomorrow. In fact, it is rather doubtful that adequate prediction can be made as to just what mathematics, science, and so forth will suffice.

It is granted that the new advances in mathematics, science, and modern language content and methodology must find their place in the school's curriculum. No doubt, many of the contemporary proposals are good ; however, most of them are far too specific and limited in point of view. In fact, one would conclude from such ideas that the shape of the future was known exactly. Such foreknowledge can be nothing more than sheer guesswork or, at best, qualified estimates with little or no certainty. On the other hand, there are some considerations which must receive top priority if the mathematics, science, or any other system of organized knowledge is to have full meaning and usefulness to the learner, no matter what may be the nature of his world. Hence, it is essential to identify and focus



attention on those concerns that must be accorded top priority in America's educational endeavour.

Not knowing the future, it seems logical to determine what broad concepts, principles, skills, and attitudes best will serve the learner in facing a new and different world. For instance, the school must be concerned much more about the basic attitudes a child learns as he studies mathematics, science, and all the other subjects at school, and as he lives at home with his parents. These fundamental ways of feeling, a person's deep-rooted approach to life and people and problems, are his real equipment for living happily in any world order.

Thus, the first priority to which the school must give attention is the task of "attitude development". To this end, the teacher and the total school resources must give purposeful planning and direction. In the setting of institutional policies governing the way of work for both teachers and pupils, there must be a keen awareness of the nature and character of those feelings which such policies will promote. Each teacher must be sensitive to the many subtle and direct ways in which the subject content being studied can contribute to the establishment of desirable attitudes within his pupils. In all his personal and group interactions with pupils, the teacher constantly must be cognizant of his impact on attitude development. For, true education often is not so much learning what one does not already know as it is becoming aware of those inner feelings generated by what he has learned or by problems he has encountered.

Specifically, this means that, as children pursue their studies in the school curriculum, they must come to value Learning, Life, Liberty, and Law. These are the top priorities demanding the school's attention. For if such are not the discernible outcomes of the pupil's pursuit of his understanding of the measures of height, weight, and depth, the intricacies of language, the rhythm of sound, the marvels of the universe with all its physical phenomena, beauty, design, and colour, then all his learning is in vain and will profit little.

An absorbing fascination for learning comes first. Children for ever must be excited and challenged by a new fact, a new idea. They should experience a real thrill out of using what they have learned to work solutions and come to conclusions. In school they must learn to think, to investigate, to find out. This deep and permanent love of learning is not an instamatic thing. Neither does it emerge just through the process of hard work at school, or through doing home-work, or passing tests. The significant outcome rests in how a child feels about his learning and why he studies. It should be a real concern of the teacher and home if the reason for learning is just to get a good grade, or to get on the honour roll, or to be promoted, or just to please adults. The measure of learning and the cause for satisfaction should come when a child learns and keeps on learning, because he wants to know.



Teachers and schools too often are guilty of stuffing children with subject content the teacher and school think are important. The sad truth, however, is that "stuffed children" are likely to be empty tomorrow, at the very time they will need most a dynamic enthusiasm for learning. The valuable teacher, then, is not necessarily the one who assigns the most, or demands the most, or grades the toughest. The really significant teacher is the creative person who searches for ways to help children to catch on fire—who will help them chase after facts they want to know and sharpen skills they want to master.

Educator and layman alike must work for the kind of schools where teachers are alive and imaginative, not dreary taskmasters who merely prod their pupils to study through fear of failure, or the promise of honour roll prestige. Today's generation is a demanding one, living in a demanding time.

A second priority is the "measure of life". Somehow, through the organized programme of studies, the child must be helped to learn to love his own life first; then he will have the capacity to love life for all mankind. For the sake of tomorrow, today's child must be glad he is who he is—proud of himself, pleased with himself. Girded with this good feeling, he will be able to grow into the courage and strength to take the tomorrows in stride.

On the surface, this may appear to be a high self-centredness and cocky conceit. It is not a support of conceit, for the child must want to change, to grow, and improve. In fact, it is impossible to stay put; one either grows up or shrinks downward. It is the unsure person who attempts to sit still, not the confident one. A child who has learned to accept himself is free to grow. Children who are convinced that no one loves or approves them cannot love or approve themselves. When a child becomes sold on the idea that he has the wrong kind of intelligence, the wrong sex, the wrong speed, the wrong talents, he feels that he is just wrong. This is no feeling to carry into an uncertain tomorrow.

The uncertain child is afraid of others. He always must keep his guard up and be set to deliver the first punch. To this child, everyone who is different—different religious beliefs, different national origin, different colour—is a threat. This shaky fear is the great barrier between persons and nations today, and will be the world's biggest obstacle in the future. Fear such as this is not inborn. The school and the home make children this way; when, just as easily, each could help them to value other people.

Those children who, in their homes and schools, have known much love and laughter are fortunate. True, they must be called down when they do wrong; they must know correction, even punishment. But, if all the days of their childhood and youth teach them that people usually are pleased with them, they will learn to love life and feel no need to hide, or to hurt. Tomorrow's century will need such persons if a good tomorrow is to prevail.



The third priority is liberty. The school and the teacher must deal expertly with this most illusive and deceptive idea—freedom. Yet, all children must come to know a “decent freedom” and to treasure it. The child’s concept and use of freedom will may be the central issue in his adult life. He must grow up knowing freedom ; he cannot begin to value it all at once when he is an adult.

Freedom should grow as the person grows. For instance, when he is two, he must have the freedom to touch and explore. When he is eight, he must have the freedom to make some noise, to play, to choose his friends. For it only is by being always “free for his age” that a person comes to know liberty in such a way that he for ever will choose freedom. Children never are too young to learn liberty, nor is a person ever too old to cease growing in his concept and use of liberty.

The implications of this priority—liberty—for the teacher and school are clear. Both teacher and school must be careful, on the one hand, not to boss children too much ; and yet, on the other hand, not to be too permissive. There must be a delicate balance between control and liberty, with both children and teachers knowing and accepting the limits of each. Over-regulated children today will become tomorrow’s passive people ; yet, totally, uncontrolled, licensed children today will be tomorrow’s insurrectionists.

The fourth and last priority suggested is a love of law. In far too many areas of society, the idea of discipline has become old-fashioned and has fallen into ill-repute. Many schools have become partners with society in avoiding the use of, or permitting any reference to, discipline. Yet, discipline seems to be a necessary ingredient of life. And, the chances are that children, in their adult life, will come to know discipline in a much larger realm than is true today. Perhaps, there will be a world government, or, even, planetary law exercising discipline over the individual and nations. Children must come to regard highly law today, if they are to choose the way of law and order as adults.

Society should view with alarm the large numbers of children today who “get away with murder” in both school and society. Granted that children must feel comfortable and reasonably free from tensions growing out of restriction at home and school ; but, they must learn that other people have rights too—father, mother, kinfolks, neighbours, friends. They must learn about discipline, but not just that control which comes only from without and which is to be obeyed only when someone bigger, or when someone in authority, is present. The world of tomorrow will be safe only if today’s boys and girls carry good discipline inside themselves. In all of its dealings with boys and girls, the school must so direct and plan for and with its pupils that the way of law and order gradually becomes their way of life. For example, the school must set wise limits geared to each child, and his age and development. Also, the school must take the



time and have the patience to let the pupils in on its thinking—to explain the why of a rule or regulation. Boys and girls must hear not just a verdict handed down from on high, but the whole case for law and order.

(By Virgil E. Struckland, Professor of Education and Internship Co-ordinator, Florida State University, Tallahassee, Published in 'School and Society', 21.1.67.)



## Means of Improving the Quality of Education in Asia

*Recommendations of the Intergovernmental Meeting of Experts, held at Manila (Philippines), from April 21 to 28, 1964.*

*Introduction.* The Meeting of Experts to consider means of improving the quality of education in Asia, organized in Manila by Unesco in collaboration with the Government of the Philippines, was held in the WHO Building (Manila) from 21 to 28 April, 1964, with the participation of experts from seven Member States from Asia and four experts from other regions.

1. Afghanistan, Ceylon, India, Iran, Japan, Pakistan and Philippines.

2. France, Union of Soviet Socialist Republics, United Kingdom and United States of America.

### Agenda

The first session of the Meeting was devoted to a general discussion of the meaning of quality in education, and the following agenda was adopted on the basis of it.

I. *General discussion of the meaning of quality in education and its relationship to the aims and objectives of education in the present technological age.* The following conclusions were arrived at :—

(a) Quality in education depends on the basic principle that all educational institutions should be conducted solely to ensure the spiritual, moral, mental and physical development of their pupils and to promote the advancement of knowledge.

(b) When a senior educational institution assumes university status, that is to say, engages in specialist teaching at the highest level and in research, the degree which it awards should be reasonably equivalent in standard to the best degrees offered elsewhere.

(c) The pressure of admissions on existing Asian universities should not be allowed to become so great that they inevitably bring about a lowering of academic standards.

(d) In each country there should be an agency working on behalf of the government which would be empowered to ensure that university standards are maintained and withhold recognition from any institution which laid claim to university status but failed to achieve those standards.

(e) There should be sound and effective alternative routes in education so that those who can pursue their studies in an institution other than a university may do so in other appropriate institutions and so avoid the overcrowding of universities.

(f) Standards should be raised to the highest level in the training of those who in the next generation will teach in universities and institutions of higher education, including teacher training colleges.

(g) The secondary schools supply the universities and provide the model management of industry and commerce. In this field, therefore, quality must also be maintained at all costs.

(h) A proper balance must always be kept between development in higher education and development at the primary stages, and to ensure this every major educational advance should be preceded by a detailed study of such vital matters as the money available, building facilities, teacher supply, salary structure and the manpower demands of the several branches of the nation's economy.

II. *Teachers as focal figures in improving standards. Recruitment, selection, training, status, conditions, etc.*

## Conclusions

(a) Teachers' salaries in both public and private schools should be comparable to those with men and women which their length and quality of training could command in other branches of the public service.

(b) Teachers should be employed full time in their respective institutions and their conditions of service, such as pensions, holidays, working hours and conditions of tenure, should be made sufficiently attractive to encourage recruitment to the profession, and the burden of their duties should in many instances be reduced.

(c) There should be a basic salary scale for all teachers, differentiated according to the length and quality of training and the length and quality of experience.

(d) The training of secondary school teachers who will have to teach at the pre-university level should be a matter for the universities, and colleges for the training of primary school teachers should also fall within the ultimate academic jurisdiction of the universities, which should be responsible for the trainees' final certifications as teachers.



(e) In all public systems of education there should be lively and stimulating activities for service training of a kind that will continually revitalize the teaching in the area.

(f) The quality of teaching is related to the number of hours of instruction given daily by the teacher and the number of pupils in each class. Research should be carried out to determine optimum teaching loads and class sizes.

(g) Secondary school teachers should have a minimum of four years of education beyond the secondary stage, but in a period of rapid expansion this period may have to be considerably reduced.

(h) In the teacher education course, academic and professional studies should be appropriately balanced. Each potential teacher should undergo a course in research methodology with special emphasis on action research, and should have undertaken the preparation of a comprehensive research paper.

(i) To recruit teachers of high quality training scholarships should be awarded on a competitive basis. Such scholarships should be equal in value to those offered for research and for other forms of professional training.

(j) Appointment and placement of graduate teachers should be made on the basis of their qualifications and the recommendations of the training authority.

*III. Organizing schools for improving quality, selection, grouping, streaming, identification of talent, catering for able early leavers, further education, etc.*

### **Conclusions**

(a) Benefits and dangers attend almost all methods of segregating children according to ability. If segregation does take place it is important to ensure that the selection of the more able does not automatically imply rejection of the less able.

(b) There may be an advantage in putting clever children through an accelerated course of study, but there is a danger of mistaking intellectual precocity for maturity of growth; a pupil may lose something by doing under pressure at 15 what he would do normally at 16.

(c) When children have to be selected according to their ability, no single criterion of selection should be relied upon. Rather, it is advised that a variety of criteria such as well-kept records, standardized tests, the teacher's views and other recognized guidance procedures should be taken into account.

(d) The educational facilities of a community can be greatly enriched by using the schools in the evening to provide instruction in a great range of adult activities which may vary from specific



vocational training to purely recreational crafts and sports or to classes designed to reduce adult illiteracy. The development of a full range of further educational activities is of particular importance in rural areas.

(e) The problem of early school leaving and ill health might well be reduced if free midday meals were provided in schools. Asian countries are urged to experiment with this step, which has been so conspicuously successful in other countries where it has been taken.

(f) Scholarships should be provided for pupils of outstanding ability who would otherwise be unable to attend a secondary school.

(g) As long as the number of places available in secondary schools is less than the number of applicants, selection is necessary, and selective places should not be available only to those whose main qualification is the ability to pay for them.

IV. *General discussion of the role of the school (in its many forms) in socio-economic development. Orientation-relationship with community, industry, agriculture, other agencies, etc., curriculum emphases—local needs.*

### Conclusions

(a) The meeting endorses the present Unesco approach to planning, and emphasizes that the most detailed and thorough economic planning should precede such major educational advance so that the needs of society for professional men, technicians, skilled craftsmen and workers can be accurately assessed.

(b) The meeting urges the importance, in implementing the Tokyo Resolutions, of relating education to the life of the community and to the environmental needs and activities as a means of developing the faculties of the student.

(c) If at a given moment of expansion a country cannot produce the trained manpower that it needs, it should not hesitate to draw experts from abroad and to send its own young men and women abroad for training.

(d) In a period of rapid technological change it is important that the secondary schools should be sufficiently flexible to provide adequately for the academic, vocational and technical needs of their pupils and society. Advisory committees should be established at each level of education to integrate the schools with industry and commerce.

(e) Vocational interests of young people uninterested in, or, for many reasons unable to give the time for, the longer, basic studies of university can be effectively served by post-secondary institutions. Such schools can also make a significant contribution



to the economy, supplying technicians, nurses, agricultural extension workers, school teachers, clerical supervisors and professional assistants as needed by society. Such schools should be set up in such a way that individuals enrolled can with appropriate supplementary study transfer to or subsequently proceed to degree awarding institutions.

*V. Curriculum and methods of teaching, length and range of courses, kinds of teaching methods, textbooks—teaching aids (television).*

(a) At the primary stage the child's environment and his first-hand experiences should be used to the full in his education and less reliance should be placed on memorizing 'book knowledge'.

(b) At this stage, however, the child be offered as rich a variety of reading material as circumstances permit in order that he may, in his early years, acquire and enjoy the habit of reading.

(c) Unesco should call together a team to produce a textbook on a suitable science subject for use in secondary schools in Asian countries.

(d) As an antidote to the present demand for technical and scientific education, each country should promote a special study which would attempt to answer the question, "What, in our day, is meant by the spiritual and cultural traditions of our country and what part should they play in the education of our children?"

(e) In the near future, countries may be able to afford the expensive apparatus implied by the newer and more inexpensive teaching aids, and they should therefore conduct experiments so that they will be experienced in their use when they can be made available.

(f) The secondary stage of education should develop a power of objective and critical thought, a desire for further comparative study and knowledge, efficient habits of study and the ability to analyse and synthesize.

(g) At the university stage it is important that the staff-student ratio should be such as to permit the effective use of seminars, tutorials and discussion groups.

(h) No student of science or technology should completely sever his connection with humanistic studies and no student of the humanities should leave the university ignorant of the main processes of science and of the scientific method.

*VI. Objectives and methods of science teaching. Importance of science, relationship with other subjects, curricular essentials—guidelines for selection of content—teaching approaches.*

(a) Considering the importance of science in the economic development of the Asian countries, it is desirable that scientific



studies and even a scientific study of the humanities should be made compulsory in the schools.

(b) In the teaching of science, the emphasis should at all times be on enquiry and discovery by the pupil himself.

(c) In order to ensure that the content of the courses in science at the various levels of education is both up-to-date and suitable for students at their respective stages of development, it is desirable that specialists in the various branches of science be employed to assist classroom teachers in the construction of curricula and the preparation of syllabuses. The help of such experts should also be sought in the preparation of textbooks in science.

(d) It is recommended that the Asian countries take the necessary steps to establish national workshops for the production of low-cost science apparatus. Unesco is requested to provide the Asian Member States with necessary technical help for the production of such apparatus.

(e) There is considerable scope for research in the methods of teaching science at the different levels of education. Universities and teachers' colleges should be committed to undertake research projects in science methodology with a view to discovering the most effective techniques of science teaching.

(f) Unesco is requested to set up a committee to study what ways and means may be adopted to use such media of instruction as television and radio in order to offset the difficulty of finding an adequate number of well-trained teachers of science.

(g) In the interest of good science teaching there should be close connection between the schools and industry.

VII. *Evaluation and research. Kinds of evaluation procedures, examinations, assessing the intangibles etc. Research in teaching and teacher education—research as an attitude of mind.*

(a) It is important that information concerning methods of selecting pupils of ability for secondary education without exposing them to external examinations should be collected and made available; and there should be experiments in Asian countries into the use of a variety of ways of selection in order to find out which is the best in the Asian context. In some of these experiments the oral test should play a considerable part.

(b) In any country there should be opportunities for educational investigation and research, and this should preferably be undertaken or sponsored by a university department.

(c) It is of fundamental importance, both for the universities and for the advancement of the countries which they serve, that



adequate funds be provided to enable universities to carry out programmes of research and publication.

### VIII. *Administration and Supervision.*

(a) In order to achieve stability in education and continuity of policy, Minister of Education should be served by an advisory committee consisting mainly of teachers, which they should consult before any major steps are taken affecting the service.

(b) Educational administrators should be recruited from among those thoroughly experienced in the problems of teaching and preferably from the teaching profession itself.

(c) A corps of enlightened supervisory teachers should be available to help and advise the schools, to conduct in-service courses of all kinds and to carry out "follow-up" studies in the schools.

(d) There should always be some effective way of associating every school with the adult members of the community which it serves.

(e) For the proper functioning of universities and for ensuring quality and standards in university education, it is fundamental to protect and preserve the autonomy of universities in internal administration and freedom of teaching.

(f) The main emphasis in supervision (inspection) should be on the guidance of teachers for the improvement of teaching and the promotion of their personal and professional growth.



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## Reform and Reorganization of Education in the Asian Region

As in the rest of the world, the termination of Second World War witnessed great change in the history of Asia. Political and social forces of profound significance had been released and the aspirations of the people found their fulfilment in the attainment of independence. National governments addressed themselves almost simultaneously to the exacting tasks of evolving, on the one hand, political institutions and structures in order to consolidate political freedom and, on the other hand, breaking the stranglehold of economic and social stagnation of the preceding era. Almost all governments declared the reform of education as one of the main goals of State policies. A variety of considerations underlie the priority given to education. There was visible everywhere the explosion of social aspirations among the people, which found expression in the demand for educational opportunities for their children. The prevailing high rate of illiteracy and the severely limited facilities for schooling presented formidable challenges. In many countries, the educational structures were still incompletely developed, being without national universities; these had to be established in order to develop integrated national education systems. Then, there was the emergence of a number of new nations whose territories formerly formed part of a larger area. They had now to establish their own education systems.

More profound than all other considerations, however, is the search for national cohesion and national identity, in which the development of national cultures and national languages is a vital element. While this is a world-wide movement, it has also a particular context for many Asian countries with their multilingual and multiracial character.

Measures for educational reconstruction took different forms in different countries. In some, high level committees or commissions were established to assess the educational system as a whole or a particular sector in it; their recommendations provided the directions for Governmental action. In others, large scale programmes were launched in order to promote educational growth in one sector or the other.

In the 1950's and till recently, the main thrust of educational



development in all the developing countries of Asia was towards expansion of educational facilities, notably at the primary level. This was the most neglected sector of education during the colonial era. In the post-war period, the total enrolment at all levels rose from 50 million in 1950 to about 140 million by 1967. At the primary level, the enrolment rose from about 42 million in 1950 to about 105 million in 1967. The expansion in individual countries was even more dramatic. For example, Indonesia, which reached the end of the colonial period with a low level of educational development, expanded its primary level rapidly, raising the primary enrolment from about 5 million in 1950 to 13 million in 1967. In Malaysia, primary enrolment increased from about 0.65 million to 1.5 million in a period of less than two decades. Expansion on this scale created great strains and stresses on education systems which were designed to handle only small numbers; and yet without an effort of this magnitude, it would have been difficult to rectify even partially the neglect of previous centuries.

In a few countries (for example, India, Pakistan) while the importance of primary education was recognized, priority of attention was given to secondary and higher education. The attempt was directed not only at expansion but also at restructuring post-primary education.

In the first few years of the post-war decade, another major thrust was in the area of adult illiteracy. Unfortunately, the programmes in most countries got overwhelmed by the sheer magnitude of the problem and the gains were less noticeable than in the expansion of formal education. Where the efforts at liquidating illiteracy were carried forward and sustained with vigour, as in Cambodia, Indonesia and Iran, however, the results were remarkably successful.

Along with numerical expansion, there was considerable institutional development, notably the establishment of universities. In a number of countries, the main national universities were established in the post-war decade, for example Afghanistan (1946), Cambodia (1962) Indonesia (1949-1963), Iran (1949-1959), Malaysia (1961), Nepal (1959). In other countries which already had universities dating from an earlier period, the main development of university education took place in the current decades.

The post-war period did not witness quite as vigorous institutional development in the field of technical, vocational and agricultural education as in the traditional forms of general education. Beginning with the 1960's, increasing attention has been given to these fields but the progress so far has not been sufficient to rectify substantially the imbalances in the education systems. As a result of the current emphasis on science teaching, beginning during the first level of education, however, new projects using modern methods of teaching are generating more widespread reform in the direction of science and technology.



In most countries, the education systems had a substantial private sector which dominated in particular the secondary and collegiate stages. Quantitative expansion is facilitated, and indeed induced, by the existence of the private sector in education but it is less than responsible when structural changes in education have to be made to guide the flow of numbers. Probably no single country, with the possible exception of Ceylon, has yet been able to harmonize the existence of privately controlled schools and the basic requirements of a national system of education.

One of the major concerns of educational reform was the development of national languages and their use in instruction. In countries where two unequal systems of education had developed, policies were adopted to unify the two systems and eliminate the disadvantage to which pupils studying through their national languages were subjected. The use of national languages in instruction was increased progressively, and though the pace varied considerably from one country to another, the direction of advance was not in doubt. In this matter, the Indonesian achievement was noteworthy and historic. A national language was created which supplanted the foreign language completely in the education system, becoming within two decades the common language of communication for a large number of linguistic groups in the far-flung chain of islands. A major contribution to this, indubitably, lay in the fact that educational facilities, particularly primary and adult education, were simultaneously expanded at an unprecedented pace.

The deepest impress of the language policies is to be seen perhaps not in the education system but in the remarkable development of the national languages within a relatively brief period of two decades, be they of ancient lineage or of vernacular origin.

The educational reforms undertaken in the immediate post-war period were in response primarily to social aspirations and the national perception of the social demand. The quantitative expansion took place within the existing structure of education, and by and large, there was no fundamental modification of that structure or reorientation of its objectives. In consequence, not only was the capacity of the system strained to the utmost, but new points of imbalance were created; for example, in the distribution of enrolments by fields of study. Furthermore, since overall social and economic planning at national level had not developed then, educational reforms were not integrated in a general design of social and economic policies nor did they cover the total range of education. Even in countries which had adopted planning for economic development, educational reform was not conceived as an integral part of economic and social planning. Their earlier programmes had therefore a strongly sectoral approach, mostly centred on a few selected points in the education system.

The implementation of the programmes was generally remarkably



successful so far as quantitative aspects were concerned. It was uneven, however, where magnitudes of structural change or quality improvement were involved. The reason must be sought for this in the relative neglect of training programmes. Though the output of trained teachers had increased, in no country was it numerically equal to the demand that enrolment increase had created, or qualitatively adequate for the kind of new problems that the schools were called upon to handle. Similar lack of training handicapped the effectiveness of the management and administrative machinery. The "inputs" of education such as teachers, their training and qualifications, curriculum and instruction, educational materials and techniques had at best a marginal role in these reforms.

The rapid growth of education in the preceding years had made it possible as well as imperative to review an education system in its totality and to relate its structure, functions, processes and growth potential to the socio-economic framework and the over-riding objective of individual development. In very recent years, new trends in educational reform are emerging strongly in the Asian region. A new phase of development is clearly underway, as evidenced in the reforms introduced in Iran and Burma, the establishment of a National Commission in Afghanistan, the recommendations of the Indian Education Commission, the proposals for reform in Pakistan, Indonesia and Malaysia.

The designation of 1970 as International Education Year by the United Nations General Assembly, on the suggestion of Unesco, was therefore uniquely appropriate because it marks the opening of a decade which may witness even more profound changes in the educational landscape in Asia.

(Bulletin of the Unesco Regional Office for Education in Asia, Volume IV, November 2, 1970.)



## The Non-Graded School in the United States

The non-graded school is no passing fad in the United States of America. It is included in all lists of current innovations at both primary and secondary levels of schooling. Although not yet well established, non-grading has captured the attention of educators in all sections of the country and often is a source of interest on the part of visiting educators from other lands. Adaptations of the non-graded plan are found in rural school districts, the harsh environment sectors of some major cities, and suburban school districts. It is quite likely that the non-graded school will no longer be considered an innovation by 1980 but will be, in some form, common practice in most schools of this country.

In a school that has become non-graded, there is no reference to grades 1, 5 or 9. These labels have been removed. Pupils do not pass, fail, or repeat grades. There are no grades. Pupils advance at differing rates of speed. A single pupil advances at various rates in his several subjects. In the most advanced forms of non-grading—as in the University Elementary School at UCLA (the University of California at Los Angeles)—each child's programme is individualized to the point of being virtually tailor-made.

The assumptions underlying non-grading are markedly different from those underlying the graded school. One set of assumptions pertains to individual differences among learners: children of the same age differ in their initial readiness to learn; they proceed on any given learning task at differing rates of speed; some acquire sophisticated and others superficial insights into phenomena; some learn well in one field and others well in something else. A second set of assumptions pertains to knowledge: knowledge is man-made and therefore changing, rather than fixed and immutable; knowledge is structured and cumulative and not just a miscellaneous array of conclusions. A third pertains to learning: each individual's 'way of learning' is unique; one learns best what he perceives to be meaningful for him; one derives meaning from the context of one's own experience, not just from the context within which the things of learning are arranged. A fourth set of assumptions pertains to the nature



of man : he develops best under conditions of trust and support, when failure is manageable and temporary rather than punishing and permanent.

In its simplest form, the non-graded school sets expectations that are as broad as the range of individual differences in a class group. Ceilings are raised for the most able and floors of attainment are lowered for the least able. The intent is to create appropriate goals and a reasonable balance of success and failure for all. This is, of course, an ideal that must be tempered by the abilities of teachers to adjust to something other than a grade standard for all.

But this is just the beginning. Copies of the same textbook for the entire class do not suffice. Books need to be redistributed throughout the school or assembled in a readily accessible place so that materials widely differing in complexity are available to each class and each pupil. A series of topics to be covered by all pupils throughout the year must be replaced by fundamental concepts and processes to be learned in a variety of ways and at differing rates of speed. Members of a class sometimes work as a total group, sometimes in small groups, and sometimes as individuals. The membership of these small groups changes frequently according to the purposes to be achieved and the nature of the tasks.

At the end of the year, there is no promotion or non-promotion, passing or failing. There is, indeed, diagnosis of each child's progress (in fact, diagnosis is a frequent occurrence—virtually continuous under ideal circumstances), appraisal of strengths and weaknesses, and learning suggestions for the following year. Non-grading leads to tailor-made rather than mass-produced education.

There appear to be no limits to what creative teachers can and will do to redesign education so as to meet individual human needs once they shake loose from conventional concepts, structures, and practices. The staff of the University Elementary School at UCLA, for example, pays little attention to a child's age in placing him with a group or in assisting him with the selection of learning activities. Children of age 7, 8, 9, 10 and 11 sometimes work side by side on the same or nearly the same tasks. Children of the same age frequently work on quite different learnings. Children who are gifted in mathematics frequently work on concepts normally reserved for junior or senior high school, regardless of their age. Similarly, children in the Oak Leaf School, near Pittsburgh, move individually and at their own speed through lessons selected from a large store of lessons. They select not only the lesson but also tests designed to help them determine when to move along to further lessons. A student in the Melbourne (Florida) non-graded high school may be proceeding simultaneously with a remedial-type reading programme and advanced mathematics. Non-grading is much less a new pattern to be learned than an invitation to respond pedagogically to human variability.



However, it is exceedingly difficult for one teacher in a school to respond creatively to the individual differences of a class group when the school as a whole is graded and when the other teachers are guided by graded expectations. Such a teacher is certain to impinge upon learning tasks viewed as reserved for lower or higher grades and, as a consequence, to incur disapproval. For non-grading to secure a foothold, then, there must be a small nucleus of teachers (and, ideally, the principal) who are dissatisfied with the rigidities of grading and open to other alternatives.

The fact that the development of a non-graded school requires group effort is both an asset and a liability. It is a liability in that few school faculties know how to work productively as a planning team and, consequently, tend to shy away from what appears to be unduly demanding. Teachers are accustomed to working alone in their cell-like rooms, maintaining only rather superficial, non-collaborative relationships with peers. Team efforts are not characteristic of educational institutions. Non-grading, then, is not the kind of innovation that sweeps thousands of individual teachers along with it. Talking about it is much easier than doing it.

On the other hand, the far-reaching changes now needed in education must embrace entire schools. A little tinkering here and there will not suffice. Those of us who espouse the philosophy underlying non-grading are not talking about merely improving conventional practices : we are talking about replacing them. The non-graded school is not a better kind of graded school. It is a new kind of school with different expectations, different content, different pupil-teacher relationships, different evaluation standards. It is a school for which we have not yet developed a vocabulary, a school which necessarily is short-changed today because even to discuss it is to use graded language and hence to distort it. Such a school assumes many shapes and forms when it results from the creative planning of a staff involved with non-graded concepts. The unshackling power of the non-graded school, then, is that it requires the kind of team effort which, once it becomes self-sustaining, goes on to completely redesign the school. No less than this will suffice if schools are to overcome obsolescence.

The critical question for such a staff becomes, then : how and where do we begin ? The tendency in the United States has been to begin by visiting schools which claim to be non-graded. there are several reservations about this as a beginning procedure. First, few existing models of non-grading are well developed. They need to be refined rather than copied. Second, persons who are not yet imbued with the concepts involved have no intellectual screen for appraising what they see. Third, visiting other schools too often becomes a passive tourism, a kind of detached spectator sport focused on the trivial and obvious rather than on fundamentals. Casual observation provides little or no opportunity to explore ideas in depth for their inter-relationships and implications. A school staff is better off to begin at home.



A beginning step is to acquire fundamental understanding of non-grading and related concepts. Parents should join with teachers in a study group designed to explore the nature of individual differences among pupils, the compatibility of these and the graded structure of school organization, the effects of non-promotion practices in graded schools, and the non-graded school as an alternative pattern. The group should read a great deal, discuss book reports, and look at real data.

The purpose is to begin what should become a continuing inquiry. It is essential to remember that non-grading is not something to be learned in any final, complete form. It is part of a way of thinking about education; consequently, new insights and new ways of implementing these insights continue to emerge through a process of disciplined inquiry. To repeat, this is why a search, through visitation, for some kind of complete and tangible model is frustrating and misleading.

The initial purpose of looking at real data is to confirm the abstraction that children are different. This may be achieved in many different ways. One useful and simple device is to study two children who are about to graduate from a given school, one for whom school has been a series of easy exercises and one for whom school has been a series of frustrations. Critical questions to ask are: In what ways did the graded system provide differentiated opportunities to meet the needs of these two, obviously different children? What adaptations in the programme were effected in recognition of their differences? Almost invariably, the answers are embarrassing ones. Usually, both pupils were exposed to the same learnings at approximately the same rates of speed. Both were victims of a system which did not adequately challenge one child and which demanded too much of the other.

Another useful procedure is to get some kind of comprehensive picture of an entire class on one or more criteria of performance. The criteria could be height and weight, speed of running a distance, or, better achievement on a test covering several subjects. When the results of several such measurements are placed in graph form, the spread of performance from the bottom to the top of a graded class of thirty pupils is staggering. A fifth-grade class, for example, spreads over five or more grades of attainment-level. When achievement scores for a second-grade class are compared with those from a fifth, it is seen that the upper and lower ends of the two overlap substantially. The message here is that there is no such thing as a fifth-grade class in anything other than name. To call it a graded class is to mislead and to perpetuate a myth.

A powerful implication is that both age and grade are poor criteria of what a child can or should learn. A child works at the level of his readiness. Books and other learning resources are made available irrespective of the grade for which they



were intended originally. Instructional groups are set up without concern for age or grade. These teachers suddenly find themselves actually involved in and practising non-grading.

It is not necessary for all of the teachers in a school to take this crucial step together. It is highly desirable, however, for the entire staff to participate in discussions pertaining to the experiment. But the pioneering few must not be expected to have answers to all the questions which arise or to provide early evidence as to the success of what they do. And it is critical that they maintain the experiment for a year or more and make constant revisions based on experience, instead of giving up when the first difficulties are encountered. Non-grading is not an easier way of proceeding. It solves some problems but creates others. Few who really understand the concepts involved and who make a sincere effort to implement them are content, however, to return to the graded system.

Team teaching provides an effective strategy for getting into non-grading. Of course, team teaching has merit in its own right; going into detail would constitute another article. In its simplest form, team teaching is a plan whereby two or more teachers agree to pool their pupils for at least part of the day and to teach them collaboratively. It does not mean simply exchanging classes for one or more subjects. It becomes apparent, then, that the three teachers referred to above might begin by working as a team with the three age-groups involved. Such an arrangement provides greater flexibility for dealing effectively with individuals, small groups, or very large groups according to the purposes in view. A non-graded and team-taught school provides the ultimate in flexibility.

Once a school faculty and the parents participating in study groups have gone through the steps just described, visits to other schools in various stages of non-grading make sense. There are now meaningful purposes for such visitation: to find out how other groups got started, to share success and failures, to exchange specific ideas for the solution of common problems, and so on. The central purpose is to enrich the dialogue within the visiting group through reflection on the experiences of others.

One of the greatest obstacles to introducing non-grading (or any other educational innovation, for that matter) is fear of making ripples. Educators and parents often want to have the school they had before—and non-grading, too! This is impossible. A truly non-graded school is a different *kind* of school, not just a modification of the old. Even the old ways of talking and thinking about school no longer suffice.

Nor is a non-graded school a stable, static thing. Once teachers fully realize that schools are, after all, the products of decisions once made by men and women and that all of these decisions can be remade, their imagination need not be confined. They and their



partners in the community may start slowly and cautiously. Indeed, there is no substitute for careful study and exploratory starts. But the concepts of designing schools for individuals, of meeting individual differences, of tailor-made schooling, are powerfully compelling. The non-graded school is, more than anything else, an implementation of such concepts. The beauty and the continuing challenge of the non-graded school is that it can take on so many shapes and colours, just so long as its designers remain true to the guiding concepts.

(Adapted from an article by John I. Goodlad, published in 'Prospects in Education' No. 1, 1969.)



## The Shortening of the Elementary Phase of Schooling in the Soviet Union

This article describes an important aspect of the changes being made in the U.S.S.R. with the immediate aim of expanding and raising the standard of general education. It is planned to bring the content of education into line with the requirements of scientific, technical and cultural progress and to make complete secondary education compulsory for the entire younger generation. These tasks were defined in detail by the Central Committee of the Soviet Communist Party and the U.S.S.R. Council of Ministers in a decree, dated 10 November, 1966, 'on measures for the further improvement of the work of the general secondary school'. This decree was based upon the results of specialized research and the experience accumulated by Soviet schools over a period of many years. Since the total duration of general education was to remain unchanged—ten years in most of the Soviet Republics and eleven years in the Republics of Latvia, Estonia and Lithuania—there were only two, interrelated, methods available for raising the level of education: a more rational selection and chronological presentation of course content, and the improvement of teaching methods. In these circumstances, it was felt that the elementary phase of general education, if reduced to three years rather than four, would make it possible to start systematic courses in the basic disciplines, taught by specialized teachers with the corresponding higher education, a year earlier; would permit the teaching of a number of important subjects earlier in subsequent grades; and would, consequently, make time available in the senior grades for the study of those aspects of mathematics, physics, chemistry, biology, etc., which had not previously found a place in the curricula but which constitute an indispensable part of modern learning. Naturally, we would not have decided to reduce the length of the elementary phase of general education unless we had been convinced, after thorough research, that such a step was possible and desirable in the interests of elementary education itself.

At this point, we shall provide a brief description of certain facts without which one would not be able to appreciate the full significance of the main text.



Schools in the U.S.S.R., after a period in the late 1920's when they were captivated by the system of 'all-inclusive' education, the 'projects method' and other educational innovations centred upon the personal experience and immediate interests (understood in a narrow sense) of pupils, began, in the 1930's, to concentrate on courses which, within the limits of common sense and pedagogical necessity, were subordinated to the system and logic of the main fields of science. In the last twenty years or so, there have been no substantial changes in the curricula covering the first four years of a pupil's schooling (between the ages of 7 and 11). These curricula were applied, in accordance with meticulously devised methods, by teachers having received four years of teacher training after the seventh grade (in more recent years, the eighth grade) of general education. As a rule, these all-round teachers taught all elementary school subjects: mother tongue, arithmetic, drawing, singing, physical culture, and, in the fourth grade, history and nature study as well. In the last few years, manual work has been added to these other subjects in all elementary grades.

Although elementary education did not give rise to any serious criticism for a long time, it gradually became clear, both within the schools themselves and in educational circles, that a number of problems affecting the elementary phase of schooling were still unsolved. One of these problems was the diversity of subjects taught in the fourth grade, which obliged teachers in many schools to engage in spontaneous specialization. In a given school, one teacher would take over the teaching of the mother tongue, another the arithmetic lessons, etc. All the subjects in the curriculum were thus delegated by mutual arrangement. This differentiation of teaching work produced better results. It gave the teacher an opportunity to improve his methods of teaching the chosen subject and, to a certain extent, prepared pupils for the transition, beginning in the fifth grade, to a system whereby instruction is provided exclusively by teachers having received university-level training: mathematicians, historians, geographers, biologists, etc. Nevertheless, the problem of continuity between the fourth and fifth grades continued to be one of the weak spots, mainly because fifth-grade teachers took little account of the training received by their pupils in the first four grades.

Research workers in education and psychology tried to define the weak spots in elementary school teaching methods—undue emphasis on memorization and repetitive exercises, for example—and in the selection and phasing of subjects taught. An analysis of the elementary curriculum and its application showed that the timing of prescribed work had not always been established according to its degree of difficulty and that the tempo of teaching certain subjects was too slow. Thus, for instance, the curriculum gave too much time to the study of the alphabet, lingered (up to the end of the first grade) on arithmetical operations up to twenty although these operations



had already been thoroughly dealt with for numbers up to ten, etc. Consequently, there was a contradiction between the increase in the number of factors developing the child's intellect outside the school (radio, television, cinema, printed matter, technology as encountered in and outside the home, etc.) and the decrease in the demands made on him at school, at least during the first years of study.

In 1958, the Academy of Pedagogical Sciences began a programme of research directed along three different lines. The first line of research was initiated by Professor L.V. Zankov, head of the Experimental Teaching Laboratory of the Academy's Institute of Educational Theory and History, who sharply criticized the traditional methods of elementary education and convincingly showed that elementary schooling could and should be at a higher level of difficulty and require a faster rate of learning. Zankov and his colleagues prepared textbooks—on all elementary subjects—whose aim was to accelerate the intellectual development of pupils in the elementary grades: they have used these textbooks for several years in experiments conducted in many schools in the Moscow region.

During the same year, the laboratory of the Academy's Institute of Psychology, directed by Professor D.B. Elkonin and his senior assistant, V.V. Davydov, began research in the learning capacity of pupils in the elementary grades. This research was based on specially devised methods for the sequential development of mental operations and concepts. The research workers attempted to explore the ability of children between 7 and 11 years of age to follow systematic courses of mathematics and grammar, and came to the conclusion that the learning capacity of children of this age was considerably higher than the level taken as a guide by the authors of the elementary grade curricula then in force. In an experiment carried out in a Moscow school and later repeated in a number of schools in the Tula and Kalinin regions, the children successfully assimilated the whole eight-year Russian language course in six years and the six-year mathematics course in four years.

Although the laboratory work by Professors Zankov and Elkonin was wide in scope and their criticism of the traditional bases of elementary education well founded, it was primarily psychological research with insufficient correlation between schooling and contemporary concepts in the corresponding disciplines (mathematics, linguistics, etc.) and insufficient guidelines for a systematic preparation of new content and new methods for elementary education, considered as an integral part of general education.

To remedy these oversights, the Academy's Institute of General and Polytechnical Education drew up new curricula based on a three-year elementary cycle, with the systematic study of Russian and mathematics to begin in the fourth grade. These curricula were tried out first of all in six urban and two rural schools in the cities of



Moscow and Leningrad and in the Moscow, Smolensk and Kursk regions. The experiment was later extended to dozens of schools in Kuibyshev and Novosibirsk, the Krasnoyarsk Territory, in the Buryat and Komi Autonomous Republics and in several other regions. These experiments were supervised by Professors M.A. Melnikov, N.S. Rozhdestvensky and A.A. Lyublinskaya and their senior assistants, S.M. Zazykov, M.I. Moro and others. The purpose of this research was to reconsider the content of elementary education, taking into account recent data on the increasing capacities of pupils in the elementary grades, the process of transition to universal secondary education and the task of bringing the content of secondary school education into line with the requirements of scientific, technological and cultural progress by improving curricula, syllabuses, textbooks and teaching methods.

Soviet educational theory and educational psychology strongly favour the view that the learning process (*i.e.*, the cumulative acquisition of knowledge, abilities and skills), though absolutely essential to the total education of a child, is not, by itself, sufficient. The content, organization and methods utilized should also reflect concern for special attention and particularized approaches. Traditional elementary education did not take this sufficiently into account. It exaggerated the importance of rote learning and repetitive exercises in reading, writing and arithmetic, and paid too little attention both to the pupil's own capacity for reflection and to the profound changes taking place in society and in the fields of science, technology and culture. Naturally, it would not have been possible to reduce elementary schooling to a three-year period without raising the goals of attainment for each grade, but the meaning and significance of the new curricula obviously go beyond a mere 'condensation' or redistribution of subject-matter previously taught over a four-year period. The new system of teaching the mother tongue in the elementary grades, for example, does not pre-suppose an accelerated memorization of rules and definitions. It places the emphasis, instead, on sustained familiarity with literary norms and on the development of an ability to analyse linguistic phenomena, to abstract general concepts from the specific ones, and to apply what is thus learned. The total requirements in regard to reading, writing, spelling and punctuation skills remain the same as they were for the four-year primary course.

The new mathematics course, too, is geared to an early development of the ability to generalize and the basing of arithmetical skills to a greater extent than in the old course on an understanding of the general principles and laws underlying the mathematical facts being studied. In the new course, practical exercises with visual aids (*e.g.*, used to lead children towards an understanding of basic rules (*e.g.*, the rules governing addition and subtraction); they are then given special exercises to help them assimilate the rules and, once the rules have been assimilated, they are allowed, to a large extent, to work by themselves on related mathematical operations. The application of



these rules to a large number of particular cases gives pupils a concrete understanding of the rules themselves and means that fewer repetitive exercises are required in the development of arithmetical skills. In traditional elementary mathematics, there was no such assimilation of general rules, principles and laws. This was deferred, often, until beyond the end of elementary schooling (to the fifth or sixth grade). Therefore, the acquisition of arithmetical skills depended entirely upon rote learning and had nothing to do with an understanding of the rules governing the exercise of those skills.

The accent placed upon conceptual understanding applies to all grades and to almost all sections of new elementary mathematics. This desire to increase the pupil's ability to generalize has led to the inclusion, in elementary-level mathematics, of basic notions in algebra and simple equations, as well as more instruction in geometry. The cultivation of a pupil's capacity to solve problems independently is further enhanced, in the new mathematics course, by the wide use of comparisons and contrasts, by demonstrations of similarities and differences in sets of practice problems, and by illustrations of such reciprocal relationships as that between direct and reverse operations and that between the components and the results of operations. On the basis of the three-year course in elementary mathematics, a course combining 'arithmetic and the basic principles of algebra', including negative numbers, co-ordinates, calculation by formulae, etc., will be given in grades IV and V.

To bring into play the formative and educative advantages, in the elementary grades, of familiarity with basic notions about nature and society, a wider selection of material for reading in these areas, in and out of class, has been provided. In grades II and III a special subject, 'nature study', has been introduced in order to enable children gradually to store up data acquired through observations of nature and to make generalizations on the basis of such data. Courses in manual work, physical education, music and art have all been improved.

As a result of research, new materials have been prepared and tested and will serve as a basis for the compilation of new textbooks (Russian language and mathematics) for the three-year elementary courses. Keeping in close contact with this research, the specialists concerned have also drafted and tried out new syllabuses for the following grades. As a result, new textbooks for grades IV and V and teaching aids corresponding to the new syllabuses and textbooks have also been prepared.

In 1966, on the basis of this research, the Commission on the Content of Education attached to the Presidium of the U.S.S.R. Academy of Sciences and of the Academy of Pedagogical Sciences submitted proposals to the government recommending, in particular, that the systematic teaching of the basic principles of the sciences should begin in the fourth grade. After



wide discussion in educational and scientific circles and after appropriate adjustments had been made, the new curriculum and syllabuses were approved by the Ministry of Education of the U.S.S.R.

Preparations for the transition from a four-year to a three-year period of elementary schooling began in 1966. Experiments along the above-mentioned three lines of research had already been conducted in the experimental schools of the Academy of Pedagogical Sciences or by enthusiastic individual teachers at some of the regular schools. The fact that positive results were obtained, however, could have been explained by the particularly favourable conditions prevailing in the selected schools. A series of experiments involving a far more generalized trial of the new elementary programme was necessary in order to confirm its validity. The Ministry of Education therefore set a schedule for the testing of the new programme as follows :

*In the school year 1966-67 :* Application of the new elementary curricula to the first grades of all schools in three rural districts in the administrative regions of Leningrad, Vladimir and Sverdlovsk.

During the last school year, the new curricula were also applied in the second grades of these schools, and, during the 1968-69 school year, they will be applied in the third grades as well.

*In the school year 1967-68 :* Application of the new curricula to the first grades of all schools in another nine districts of the same region (R.S.S.F.R. : the Russian Soviet Socialist Federated Republic) as well as in some of the schools in other Soviet Republics. Grade II, in these same schools, will convert to the new system during the 1968-69 school year.

*During the school year 1968-69 :* Application of the new curricula to the first grades of all schools in Moscow and in one district of each administrative area of the R.S.S.F.R. In all, more than 400,000 school children will be under the new regime.

The results of these experiments are currently available only for schools in twelve districts of the R.S.S.F.R., and in a few districts of other Soviet Republics—in all, 617 schools with some 15,000 first-year and 10,000 second-year pupils. These results confirm the hypothesis that elementary schooling can be completed in three years. By the end of the 1967-68 school year, an overwhelming majority of the selected schools (97-100 per cent) had completely covered the course-content newly prescribed for grades I and II. Final examinations in the accelerated courses were successfully passed by 87 per cent of the first-grade pupils and 97 per cent of the second-grade pupils (Russian language) and by 80 per cent of first-grade pupils and 93 per cent of second-grade pupils (mathematics).

Bearing in mind that teachers were unfamiliar with the new syllabuses, it is important to note that higher indices of successful



instruction were obtained in schools which had already switched to the new programme the previous year. In general, as teachers gain experience with the new syllabuses, the indices of successful instruction also rise. Furthermore, the new emphasis on the understanding of rules and concepts enables pupils to assimilate and retain knowledge, abilities and skills more readily in the following grades. In evaluating these results, the Collegium of the Ministry of Education of the R.S.S.F.R. pointed out that the new programme of elementary schooling promotes the pupil's general development as well as his greater awareness in the assimilation of knowledge and in the acquisition of abilities and skills, thus providing the right kind of preparation for subsequent systematic study in the basic principles of the sciences. This is precisely what the programme was designed to do.

In view of the generally favourable evaluation of the results obtained from the testing of the new elementary programme, the U.S.S.R. Ministry of Education decided that the first-grade classes of all schools in the U.S.S.R. should change over to the new syllabuses and textbooks in the school year 1969-70, with second-grade and third-grade classes to be converted in the following years. Simultaneously, syllabuses and textbooks for all subjects studied in grades IV to X are being revised on a staggered one to two-year schedule, but this falls outside the scope of the present article.

(Adapted from an article by A. Arsenyev and A. Markushevich published in 'Prospects in Education', No. 1, 1969.)



## A Revolution in Primary Education in U.S.S.R.

This year the reform of primary education comes into force in all schools in the Soviet Union. Its main feature is that it covers in three years a course of studies which up till now has taken four. The new course has already been tried out experimentally in many schools, and now every seven-year-old starting school (seven is the age of compulsory school attendance in the Soviet Union) will embark on the new syllabuses.

There are many reasons for this reform. In the Soviet Union, as everywhere else, the rapid evolution of science and technology has raised the problem of how to adapt education to the demands of a highly technological society.

The Soviet authorities decided to extend the period of universal (primary and secondary) general education to last ten years, providing schooling to all children up to the age of 17. This project is now being put into effect. At the same time it was recognized that the actual standard of education needed to be improved, and for this to be done previously accepted concepts about primary education had to be revised.

### **In School and Out**

For many years the methods used in traditional schools had been under fire for appealing too much to memory and memory alone. Critics alleged that learning by rote and exercises in reading, writing and arithmetic were exaggerated at the expense of the child's general development. Also, the rhythm of life itself was changing, for children as well as adults. Radio and television brought scientific and other information to the most far-flung parts of the Soviet Union. Inside the home and out, gadgets and technical innovations were becoming commonplace. Children starting school at seven already had much more extensive non-academic knowledge than their counterparts thirty or forty years earlier.

In 1958, the Academy of Pedagogical Sciences of the Russian Republic launched a programme of research along three lines :



The Experimental Teaching Laboratory at the Academy's Institute of Educational Theory and History studied the possibility of speeding up the rate of intellectual development in young children. Special syllabuses were drawn up with this in view.

At the same time, in the Institute of Psychology, research was carried out into the powers of assimilation in children of primary school age. It was soon found that these powers had been underestimated.

The Academy's Institute of General and Polytechnic Education designed syllabuses which linked teaching with modern concepts of mathematics, linguistics, and so on. The content and methods of elementary education were completely revised, as an integral part of secondary education.

### **Learning Through Understanding**

The traditional methods laid stress on memory. But now, instead of asking their pupils merely to repeat what they had been told, teachers encouraged them to draw their own conclusions from what they had learned. The contribution made by the teacher or the text-book remained the basic source of the child's knowledge, but the way this knowledge was assimilated was now quite different. Instead of acquiring facts and ideas by rote, the child was helped towards a fundamental understanding of the things he learned, and of the organic connections between them.

Question and answer play a major part in this system. Classes are lively and animated, and an atmosphere of familiarity and confidence soon develops between teacher and pupils. The children pay close attention to one another's answers. A difficult problem calls for reflection and restraint. But because the children are learning to think coherently, they work towards a solution without any feeling of strain or tension. All this facilitates not only the development of intelligence but also that of aesthetic sensibility, will-power and perseverance.

The primary school reform concentrates mainly on the teaching of the Russian language and of mathematics.

The new way of teaching Russian does not involve *more* grammatical theory, but a *better* use of grammar in order to raise standards of self-expression, to bring out the structures of the language, and to enrich the children's vocabulary. Once they have learned to pay attention to and analyse linguistic phenomena, children can make the transition from concrete to abstract without difficulty.

In the case of mathematics the object is the same—to give more importance to general concepts. It has been found that seven-year-olds of normal intelligence are quite capable of doing elementary algebra, solving arithmetical problems by simple equations, and elementary geometry.



Of course the schools themselves have been or are being reorganized, and new equipment is made available as far as possible, not only in the form of new textbooks but also in that of television sets, tape-recorders, films and computers.

The testing of these new methods in 617 schools (15,000 first-year pupils and 10,000 second-year pupils—25,000 seven and eight-year-olds in all) has produced very positive results. Most of the teachers managed to get through the whole of the new syllabus. In the examination held at the end of the year, 87% of the first-year pupils and 97% of the second-year pupils passed in Russian. In mathematics, 80% of the first-years and 93% of the second-years passed. Results, therefore, were better in those classes which had already followed the new courses the previous year. Comparison between pupils of the same age in "traditional" and "new" classes, both in town and country, showed that results were better in the "new".

### **Searching Experience for Teachers**

It would be misleading to suggest that all these changes have been carried out without problems, some of which have yet to be solved. The transition from the old system to the new has been a searching experience for the teachers, most of whom have had to abandon old ways and set about what amounts to a complete re-training.

To enable the primary school to carry out its new tasks is a delicate operation. The difficulties faced are those of any expansion, but they can be overcome by the judicious extension of scientifically tested methods. The results so far obtained show that the new primary education encourages the child's development, helps him to assimilate knowledge and skills better, and so gives elementary school pupils a sound foundation for later initiation into systematic scientific instruction. The object of the operation has been achieved.

It should be noted that the primary school reform was made possible by the combination of modern pedagogical research and the practical experience of teachers.

(By Alexander Arsenyev, Director of the Institute of General and Polytechnic Education; Alexis Markushevich, chairman of the Commission on teaching programmes; and L.V. Zankov, head of the Experimental Teaching Laboratory.)



## The Rural One-Teacher School

Many countries use the one-teacher school to bring education to children in isolated rural areas. A survey conducted by the International Bureau of Education reports that in 1961 India had 116,263 one-teacher schools, Brazil 80,856, France 43,490, Canada more than 10,000, and in 1958-59 the United States had 23,695. In Nicaragua, they constituted 95 per cent of all rural schools; while in Australia they were more common than any other school; in New Zealand, a minimum of nine children justifies, in principle, the existence of a one-teacher school. The same study claims that in the forty-five countries that supplied statistics, one teacher in nine has a sole-charge school; the total world pupil enrolment in these schools exceeds 11 million. Referring to the quality of instruction received, the survey concludes that these children compare favourably with those of larger schools, and are qualified to proceed to academic and vocational secondary schools.

The one-teacher school has many advantages. It has been referred to as the archetype of all educational arrangements: the teacher a prophet with his band of followers—the educational pioneer. It has special virtues. Being small it is relatively cheap to build; the children resemble a family unit resulting in the development of a protective spirit among the older pupils, with the mentally endowed taught to share their scholarship. The teacher is more of a planner, parent and counsellor than a pedagogue. He cannot hope to direct in orthodox fashion all grades at the same time. He no longer teaches from the front of the room, but moves amongst his students, giving group or individual assistance wherever it is required the most. The students are thrown on their own resources, and through wise guidance learn to manage their own affairs, discuss mutual problems, arrive at valid conclusions and control the behaviour of their group.

Small rural communities want and need a school of their own; it should provide education for the children and be a social centre for the adults. Community responsibility should shape the school to serve a community purpose, with ample space for school activities during the day, and for adult extension classes during the evenings and week-ends. All rural schools need an extra room as a workshop



for pupils and adults in the district. There should be a library and adequate playing fields. There should also be a tree nursery, experimental farm crops, and a vegetable garden.

For the girls and women of the district there should be facilities for homecraft, where they learn the rudiments of health and hygiene, of sanitation and child-care, of nutrition, cooking and sewing. There will be, of course, a stove or brazier similar to the one used at home.

The rural school, therefore, be it small or large, is a centre where real experiments are tried, farming and health problems discussed and social resources mobilized. It should be a generator of new ideas, encouraging a new way of thinking and of living. A rural school in use for nine months of the year and closed for three should not be accepted.

These schools have proved themselves in Western countries, and they could be equally effective in developing countries when staffed by well-educated, mature teachers who have received specific training in the techniques of multiple-class teaching, and who fully understand the role schools should play in the modern trend of ruralization.

It is well, at this stage, to consider what we mean by ruralization, so that it is clear what we are educating country children for. Does the term mean that more time be devoted to gardening? Or that rural schools educate for farming? Or has the term a much wider connotation?

There should be general agreement on the following principles:

*Every child, whether he lives in the town or in the country, is entitled to a sound basic education.* It is wrong to assume that there should be one type of education for the city child and another for his country cousin. It should be recognized that whether children live in crowded cities or in villages, on desert plains or in isolated valleys, a sound general education is their birthright. Many of the world's eminent scholars, scientists, statesmen, artists and musicians were born in the world's quietest places and received their first schooling in village schools. Equal opportunities for each individual to develop to his full potential should be available, whether he lives in the city or the country, for intelligence is a factor found in lonely places as well as busy ones. It is found wherever you find children, no matter how humble their homes, or whatever their nationality, or colour, or race, or religion. It should be remembered that many of the present statesmen of developing countries were born in isolated areas and some began work at an early age.

One of the functions of the rural school is to teach children how to control their environment and not become slaves to it. This implies



a sound basic education. The aim is to teach not for agriculture, but through agriculture. The ends remain the same, no matter where a child lives ; only the means differ.

*No matter what form education takes in rural areas, it alone will not check the urban drift.* An educated person seeks opportunities. If they exist in rural areas he remains ; if not he leaves, and his departure is accelerated when there is a dearth of health and social facilities. The urban drift is a universal problem ; its causes are political, economic and social, rather than educational. Youth requires not only a school but opportunities for employment with prospects of advancement and a decent wage. He also wants libraries and evening extension classes, films and youth clubs and a sports-ground. It is naive to imagine that a rurally oriented curriculum will retain young people if these amenities are lacking. No education in the world will encourage boys to remain on the land if by so doing they are to become subsistence farmers. Ruralization must be imaginative and forward looking. It must bring a message of hope for youth—a message which offers an equitable system of land tenure, large land settlement projects, irrigation schemes, better roads and transport, community centres, cottage industries, co-operatives, hospitals, agricultural and industrial research centres, and marketing facilities.

Ruralization, however, means more than agricultural development. It should be borne in mind that national economies based solely upon agriculture are unstable. The growing of more produce or the rearing of more cattle will not necessarily improve a country's economy. What is needed is increased productivity of quality goods produced more economically, to supply both the home market and to compete in world markets. This implies scientific farming, which in turn demands that farmers be better educated and more receptive to modern methods of farming.

In most countries economies ought to be diversified and industries decentralized. Ruralization should aim to develop industries associated with agriculture. What is needed are canning factories and freezing plants near orchards and vegetable fields; textile mills near the source of supply and fish farming in the lake districts. And all these developments call for a sound basic education.

These concepts indicate the shape and direction that rural education must take. The problem, however, is only partly educational. It is also the concern of all other ministries, especially those of finance, agriculture, health, community development, transport, commerce and industry. Ruralization will be successful only if there is co-ordinated action on the part of all.

*Ruralization should aim to improve the lot of women.* Ruralization should emancipate women from heavy labouring tasks. The family is still the basis upon which most societies are built, and the well-educated mother is of primary importance in bringing stability



to the home and to society. Let us also see that opportunities are provided for girls to be well educated, so that they may be trained as teachers or nurses. Emancipation of women through education should be a basic aim.

Now let us see how one-teacher schools are organized to put into practice what we have preached.

Multiple-class teaching is not easy : it calls for considerable planning, organization and resourcefulness, as the teacher has to plan programmes of work consistent with different ages, interests and abilities. Methods are based upon discovery and activity which are harder to organise than formal instruction.

One may wonder how a teacher copes with so many grades all working on different programmes. The answer lies in the grouping of grades whenever possible. For instance, in music, art and physical education the students can be taught as one class. In subjects such as language arts, social studies, health and rural science the six grades may be paired into three groups say, lower, middle and upper. In mathematics, they may have to work according to their specific grades, but with their pace regulated only by their ability. Flexibility is the keynote, coupled with informality : there is seldom a rigid division of students into grades. A bright child in grade 4 may well work with grade 5 or 6 in a subject in which he has special ability.

The experienced teacher will co-ordinate the students' activities with a judicious balance between oral, exploratory and written work. Furthermore, students work at their own pace from well-prepared programmes, and there is no restless waiting for everybody to finish before the next assignment is begun. It is advisable that new programmes or topics be planned for the beginning of the week, with follow-up activities, investigations and consolidation following later, when work is reviewed, presented as reports, or refined with conclusions enumerated and summarized.

The teacher's main responsibility lies in the preparation of programmes of work and in his ability to lead students to appropriate places of interest, and to place before them resource materials. The planning of programmes of instruction should be part of a teacher's training. As his experience grows he will gather for his school resources materials to supplement information discovered by the students themselves.

The time-table should be planned as a simple guide to ensure adequate distribution of time among the various study programmes. It must not be a strait-jacket restricting the integration of subjects ; it should be functional and easily adapted to meet the needs of the syllabus and the seasonal changes of the locality: it should be a working guide that all students understand.



To illustrate the nature of the programmes in a one-teacher school, various activities are outlined, with the six grades grouped at three levels, *i.e.*, lower, middle and upper.

### **Lower Level (Grades 1 and 2)**

These grades are the most difficult to organize, as lessons with young children are of short duration and explanations have to be very clear. The weekly time-table is divided into subject periods, or if preferred, into developmental areas. Directions are given verbally or written on the blackboard with new work explained to each grade within the group. It is imperative that there be available a multiplicity of individual reading and number cards to reinforce the teacher's instruction, and to enable children to work on their own with the help of well-defined guidelines.

General tuition at this level should be given to the whole group, as individual tuition causes needless repetition. If several children find the work difficult, the group should be called together around the blackboard and the demonstration repeated.

At this level the foundation is laid for a thorough understanding of the basic skills. The progressions are discussion, explanation, illustration and group and individual activities. When processes are undertaken they are consolidated by didactic apparatus, reading and number cards, mime, dramatization, graphic illustration and oral and written recapitulation.

Thus, from the very beginning pupils are taught to work independently either as a group, or individually. The teacher's function is to prepare, explain, guide, encourage, check progress, reteach if necessary, correct work and be on hand to ensure an orderly change-over of activities. At the same time he must exercise vigilance over the students in the other grades and give assistance and direction when necessary.

### **Middle Level (Grades 3 and 4)**

With students at this level habits are being established of self-study with the gradual transition from group instruction to group discussion under their own leaders.

This is the age when children are adventurers and explorers. They are interested in finding out how things work: they want to do things for themselves. The teacher's job is to channel this interest and energy into projects based on purposeful activity rather than passivity; on doing rather than listening; on creativity rather than imitation. The sole charge school should be an exciting place for children, with colourful pictures and charts on the wall related to information discovered. There should be a wall newspaper containing



items of local, national or international interest, and a lively nature table displaying varieties of seeds, plants and insects.

The syllabus extends into the playground, the fields and village life. Students find out which crops grow best in the district and why; the most effective fertilizer to use and the benefits of irrigation, weeding and hoeing. They collect insects, examine their structure, find out their habits and how they breed; and which are useful, which harmful.

The school gardens should not be too large, for there is little sense in children leaving the drudgery of farming at home to undertake the same kind of drudgery at school. There should be fowls to feed, a tree nursery from which seedlings are distributed to local farmers, and fruit trees if the climate is favourable. The students will help to test the school and village water supply, and learn how to purify water. They will learn how to cap a well, breed and rear farm animals; and they will use tools and make furniture and develop manual dexterity.

The girls will be involved in many of these activities, too, but instead of woodwork will have needle-craft or basketry or other forms of handicrafts; and there will be practical lessons in health, child-care and nutrition.

The general approach to these activity methods is an integrated one. Students develop skills of communication through oral discussion, debate and reporting; through writing to people and organizations for information; through recording their findings, and writing their own booklets. They develop mathematical concepts through a functional approach to number. They learn to measure distances, heights and areas; to keep accounts, and to budget—either for the farm or for the household.

### **Upper Level (Grades 5 and 6)**

Students at this level are familiar with problem solving and methods based upon discovery. Habits of self-study are well established, enabling students to work at their own pace from programmed instruction based upon the syllabus. These should be planned so that children are trained to recognize similarities and differences, and discover relationships. In this way they are taught how to think.

The success of investigations conducted by children depends upon a clear understanding of the problem, and an agreement upon ways and means of solving it. Arising out of teacher-student discussion, the group will agree on what they have to find out, how they intend to find it out, and how the finding out is to be shared.



They may agree to visit an historic site or a model farm as the case may be; and further agree to write to the agricultural extension agent to accompany them. One of the groups may be delegated to write to a village elder inviting him to visit the school and speak from first-hand experience about the problem in hand. Another student may be requested to interview a health officer, another to write to a business firm for brochures and illustrated pamphlets, another to prepare a report using school texts and references. When the teacher is assured that the students have prepared a workable plan of action, he allows them to begin their investigations. At a later stage all the findings and reports are discussed, collated, summarized and recorded for future reference. In this way they are taught to plan and to put their plans into action.

Of course every topic cannot be dealt with in this way; nor can the whole syllabus be integrated with agriculture or rural science, or with the topography and the customs of the local area. Text books and references have to be used when dealing with world geography or history, and certain aspects of science and literature. There is still a place for the formal lesson when a new mathematical idea is taught, or a new skill is acquired, or when there is a dearth of instructional materials. However, the formal lesson is the last resort: it is comparatively easy to give a formal lesson, but the teacher has done nothing vital if the information he gives could have been discovered by the students themselves.

When children leave their one-teacher school they will have learnt many things not taught at city schools, or at schools where formal instruction is the rule. They will have developed habits of self-study and know how to apply what they have learnt. They will know how to work co-operatively for the common good: how to plan for action, to relate cause and effect, to be critical in their thinking, to rebut superstition and be receptive to new ideas. They will understand the environment in which they live, and know how to utilize its resources. They will know the basic skills of number and communication, both oral and written, and know the customs and traditions of their country.

On the practical side they will know how to purify water, take precautions against endemic diseases, dig a drain in the right place, check erosion, use fertilizers, improve crop yields, farm more economically. They will also be able to render first aid, keep accounts related to the farm, business or the household, and use their hands. They will be well equipped to attend secondary school or work intelligently on the land, in the home, or in industry.

The organization of the one-teacher school is based upon the well-known educational maxim 'learn by doing'. This is epitomized in an old Chinese proverb which says: 'What I hear I forget, what I read I remember—but what I do I know.'

(By N.S. Lovegrove, Unesco Technical Assistance Mission in Addis Ababa as an Adviser in primary teacher training. *Reprinted from Prospects in Education* No. 2, 1969—a Unesco Quarterly Bulletin.)



## Content of Primary Education in Africa

In many African countries, the structures and content of education still suffer from having been conceived and developed outside Africa with no real ties to the cultural traditions, urgent economic requirements or specific aspirations of African peoples.

Primary education in Africa, copied from European models, is too speculative and, consequently, tends to draw children away from the realities of their own countries. Since it is not sufficiently adapted to a specifically African psychology, it too often neglects the links between the individual and his civilization, it gives too little attention to the relationships between individuals and groups, and, worst of all, it ignores national development problems and gives young Africans no motivation to contribute their talents and energies to African social and economic progress.

During their meeting in Nairobi, African education authorities, aware of the faults just described, unanimously felt that the content of primary education would have to undergo reform in the coming years. They therefore adopted the following guidelines :

*First Objective :* Primary education for all children as soon as possible.

*Second Objective :* National unity. The widening gap between the educated elite and the illiterate masses should be rapidly closed.

*Third Objective :* Socio-cultural integration. Drawing its inspiration from the local environment and cultural heritage, primary education should contribute to the attachment of children to their milieu.

*Fourth Objective :* The inclusion of primary education in socio-economic development perspectives. Education should prepare children more for a rôle as producers than as consumers and, to the extent that African economies are predominantly agricultural, should contribute to the development of agricultural resources throughout Africa.



All of this implies, of course, changes in the role of the primary school which must be not only to transmit knowledge, but to teach children how to improve their condition in life and transform their environment. There should be concern for the transmittal of values also, but the accent should be upon the role of preparing children to break through the confines of their milieu in order to enlarge its perspectives—as well as their own.

In short, it has become imperative that the content of primary education be revised from both the economic development point of view and from that of its better adaptation to the ways of living and the socio-cultural values of African countries. This presupposes such a reorganisation of programmes as to provide each African child with enough basic learning to enable him to pursue studies at the secondary level and, simultaneously, basic instruction in subjects relevant to rural life. Such a curriculum is essential to the balanced progress of societies that are mainly agricultural especially since primary education is terminal in most cases.

The content of primary education should be of the practical and pragmatic sort that would be appropriate to rural children likely to be involved with agricultural development. The planning and implementation of this new kind of primary education should involve not only the talents of educational officials, but those of specialists in the field of agriculture, public health, development planning and, eventually, vernacular languages. Bookish and theoretical teaching should make way for a kind of teaching that would produce civic-minded young people, aware of development problems and anxious to know and understand the world in which they live.

The content of primary education should also lead to a better integration of African children within their respective communities and help to reduce their migration to urban areas—a migration that is not justified by the availability of employment. That kind of integration can work only if the school ceases to be a foreign body in the community. The school should help children to a better understanding of the society in which they live and should not provide a classroom atmosphere in opposition to the rules of behaviour emanating from the home environment. All too often, in fact, African children are torn between two contradictory influences: one which prevails at home and one which prevails at school. Consequently, if the school neglects traditional cultural and moral values, children finally assume two quite separate behaviour patterns: one for the school, one for the village. The school then becomes a means by which to escape local realities and to pursue self-centred ambitions which can consummate the divorce between young people and their milieu.

Though African children must open their ties to a world far more vast than their villages, such perspective must be built upon



the socio-cultural realities of their own milieu. Primary education, then, should give special attention to the study and analysis of the immediate environment in order to reduce the risk of social alienation. Regular contact with the local population and practical exercises involving social and economic problems in selected sectors of the surrounding community should be part of the school activity. Written and oral classroom exercises should deal with subjects pertinent to the host community, and the teaching of mathematics and science would profit too, from practical exercises dealing with the concrete substance of the milieu. Finally, though overburdened curricula should be trimmed as much as possible, certain subjects—such as geography and mathematics—should include applications to local production activities and there should be some introduction to farming and handicrafts.

There still remains the question of the language of instruction: Is the use of a classroom language other than the mother tongue an alienating factor? Though the use of one's mother tongue or national language in school would be desirable, other factors (the consolidation of national unity, the availability of teaching materials and teacher-training institutions, the advantages of a widely spoken language) tend to impose the use of another vehicle—French or English in particular. Schools, which have introduced bilingual teaching at the primary level seem to have obtained satisfactory results. It might be quite worthwhile to launch a depth study of bilingual education in African countries where languages of international utility (French and English) are employed as a second language of instruction. Such a study would attempt to define the optimum age for initiating the study of a foreign language and perfect the methodology of its application, based upon the direct method with the use of audio-visual aids whenever possible.

In conclusion, it is self-evident that the revision of the content of primary education in Africa and its adaptation to socio-economic realities are tasks to be undertaken with great care and caution. The first step in such an enterprise should be an evaluation of the output of the education system existing in each country. Such an evaluation has already been made for the continent as a whole. It showed that, in spite of serious efforts towards adaptation, the overall output at the primary level is still very inadequate: one illustration of this is the rate of primary school failure and dropout, which was estimated at 68 per cent.

Another necessary step would involve the organisation of educational research which, according to experts, should try to define optimum procedures for the adaptation and the 'ruralisation' which Africa knows—perhaps rather confusedly—are needed. Such procedures are currently being tried in all African educational systems in a rather dogmatic and empirical way, but, if they are to provide



scientifically sound solution, they must be accompanied by careful research. This is bound to be very costly in terms of human and financial resources, yet, in the long run, the investment is worthwhile—considering the savings in efficiency and the exactitude of the correlations that can thus be established between the needs and aspirations of African peoples and the education systems at their disposal.

(Adapted from the article by Samuel Rajaona, published in *Perspectives in Education*, No. 1, 1969.)



## The Duration and Content of Primary Education in Asia

Though many Asian countries have made substantial progress towards the establishment of universal primary education in the past two decades, there is still a considerable gap between planning and implementation. Bridging that gap has been particularly difficult owing to the fact that the mobilization of available resources in Asia has been constantly undermined by the acceleration of population growth in the region. The rapid rate of population growth in Asian countries is the result of a high birth rate and a large reduction in the mortality rate. The high birth rate has a marked effect on the age structure of the population. Over 40 per cent of the people in Asia are under 15 years of age as compared with about 32 per cent in North America and 26 per cent in Europe. This means that, at the primary and the lower secondary levels of education, the developing Asian countries have a much heavier educational load to carry than the economically advanced nations of the West.

This survey will cover only twenty-four of the fifty-odd countries of Asia. Six of the countries chosen are in the 'Middle East' region of Asia (Iraq, Jordan, Lebanon, Saudi Arabia, Syria and Turkey) and eighteen are in south and east Asia (Afghanistan, Burma, Ceylon, Cambodia, Republic of China, India, Indonesia, Iran, Republic of Korea, Laos, Malaysia, Mongolia, Nepal, Pakistan, the Philippines, Singapore, Thailand and Republic of Viet-Nam). Mainland China, North Korea and North Viet-Nam were excluded because of insufficient statistical material; Japan was excluded so that this brief survey might concentrate upon problems common to the developing nations of the region. The reader may also wish to note that the eighteen countries of south and east Asia are all participants in the Karachi Plan, a regional plan prepared in 1960 with Unesco assistance, for free and compulsory education of a minimum of seven years' duration.

### A Look at Enrolment Figures

The twenty-four developing countries in the two Asian regions just described are at varying stages of economic growth, but all of



them utilize the concept of educational planning as an integral part of development planning. Most of them have formulated five-year plans in education with fixed enrolment targets and precise schemes for qualitative improvement. Since 1950, the pace for educational expansion has been rapid at every level—but the pace at the primary level has been particularly remarkable.

The statutory duration of primary education in the countries under study varies from five to eight years, with an average of just under six years.

The measurement of primary-school enrolment as compared to population figures for the pertinent age-group varies considerably from country to country. Seven of the twenty-four countries (Ceylon, Republic of China, Republic of Korea, Mongolia, the Philippines, Singapore and Thailand) have primary-school enrolment ratios of at least 90 per cent, whereas the seven lowest-ranking countries, in terms of school attendance, have enrolment ratios ranging from 13 to 49 per cent. Nearly all the countries under consideration have compulsory education laws, but, where resources do not permit the establishment of sufficient facilities, such laws obviously cannot be enforced.

### **Disparities in Enrolment**

Enrolment ratios are national averages which conceal vast differences between the educational opportunities available within any given country. For example, in Iran, only 30 per cent of the population resided in urban areas in 1962, yet those areas accounted for more than 60 per cent of Iran's primary-school enrolment for 1962. In Malaysia and in Thailand, most of the children of primary-school age who are not attending school live in rural areas and in poor economic circumstances. In Afghanistan, a majority of the village schools do not go beyond grade III. In India, a great number of the villages in remote areas cannot provide education beyond grade IV. Similar disparities exist in other Asian countries.

In many parts of Asia a disparity exists, too, in so far as the enrolment of girls in primary schools is concerned. This is particularly true in Afghanistan, Iraq, Saudi Arabia, Syria, Pakistan and even India. The causes of this disparity are both social and economic. Customs and traditions, as well as the employment of girls on household chores, continue to block progress in this field. There is, nonetheless, a definite trend towards increased female enrolments in primary education. In half of the countries under consideration, girls make up at least 45 per cent of total primary-school enrolment. In the Republic of Korea, Lebanon, the Philippines and Thailand, the ratio is very nearly 50 per cent.

### **The Problem of Drop-outs and Wastage**

Enrolment ratios do not take into account the wastage that occurs when pupils withdraw from school prior to the completion of



a given cycle of education (drop-outs) or when pupils repeat the same grade because of unsatisfactory achievement. Since most repeaters ultimately become drop-outs, the extent of wastage at the primary level can be measured by drawing comparisons between the number of grade I entrants and the number of pupils completing the primary cycle in a given locality and over a given number of years.

Studies of this sort were carried out recently in south and east Asia where it was found that, for the region as a whole, barely 40 per cent of all primary-school entrants actually complete the first four years of the cycle. The highest drop-out rate occurs in the interval between the first and second years of primary-school study. While six of the countries under study showed attrition rates of 10 per cent or less during the grade I-grade II interval, a vast majority of the other countries under study showed drop-out rates varying from 30 to 66 per cent over the same critical interval. Drop-out rates are generally higher for girls than for boys and much higher in rural than in urban areas—thus increasing the disparity of educational opportunities provided within any given country.

Socio-economic factors such as poverty, the use of child labour at home and parental attitudes towards education are largely responsible for high drop-out rates. That responsibility is shared, however, with factors which originate in the education system itself: crowded classrooms, ill-adapted curricula, lack of appropriate text-books and instructional material, ill-trained teachers and inadequate teaching and evaluation methods.

Another common cause of wastage in primary education throughout Asia is the wide separation of ages within each grade-level. The high proportion of 'over-age' pupils that prevails in many Asian schools obviously exacerbates the drop-out problem. One remedial measure tried in some Asian countries has been the adoption of automatic promotion in the beginning grades.

It is particularly unfortunate that most of the pupils who drop out do so before they have overcome the handicap of illiteracy. Such a waste of human and financial resources is a heavy burden to the developing nations. One obvious way to lighten this burden is through measures aimed at correcting the major faults in existing primary school systems. This, in turn, implies some far-reaching improvements in what is offered to school-age children—particularly in so far as the content of education is concerned.

### **Changes in the Content of Primary Education**

A common criticism of the curriculum of primary schools in Asian countries is that it is often ill-adapted to the needs of the child and his environment. During the last ten years, however, especially in south and east Asia, much attention has been devoted to curriculum revision. Many countries in the region have introduced changes



involving the addition of new subjects or the strengthening of old ones.

The Karachi Plan for the Development of Primary Education in Asia, was defined at a meeting of Asian Member States of Unesco at Karachi in 1960. After examining existing conditions, delegates recommended the following basic elements for inclusion in the primary-school curriculum: (a) language; (b) mathematics; (c) social studies; (d) ethics and religion; (e) general science and hygiene; (f) music and art; (g) crafts and home sciences; (h) physical education.

Since 1960, crafts and home sciences, art, social studies and physical education have, in fact, been introduced or re-emphasized throughout the primary schools of Asia. General science, however, is taught as an integrated subject in only a few places and still appears most frequently as part of 'nature studies' or environmental studies, or even within the context of language studies. In any case, there is a definite trend towards a more practical and less abstract type of primary education.

### Deficiencies in the Curriculum

Obviously, the mere inclusion of new subjects in the curriculum will not guarantee automatic success in the fulfilment of basic primary-school objectives. A great deal depends upon the relative importance accorded to different subjects. From this point of view, the learning of the first language should top the list of priorities—particularly since such a large number of children drop out and lapse into illiteracy. Unfortunately, the time spent on basic language studies is often insufficient involving less than 20 per cent of classroom time in some cases. In the same way, social studies—critical to the development of citizenship qualities—are often allotted too little classroom time: sometimes less than 6 per cent.

The Education Commission appointed by the Government of India (1964-66) noted—and its conclusions apply to much of Asia—that much of the revision of the primary-school curriculum carried out so far has been 'of an *ad hoc* character—not generally preceded by careful research, not based on adequate expertise, and not followed by such necessary supporting measures as the preparation of learning materials, the orientation of teachers, or the provision of the needed physical facilities'. By and large, the primary-school curriculum is still narrowly conceived in Asia as a list of subjects to be studied rather than as a totality of the pupil's experience planned and directed by the school. Worse yet, the curriculum is usually imposed from above and prescribed with inflexible uniformity for all the schools in a given country. Such procedures tend to cramp the freedom of creative teachers and to make experimental work almost impossible.



### **Problems of Teacher Training and Procurement**

The teacher is naturally the decisive factor in translating a revised curriculum into improved classroom practices. There is, however, not only a dearth of creative teachers at the primary level but a lack of teachers of even doubtful qualification. The rate of primary-school enrolment has, in most cases, outstripped the rate of teacher-procurement with a consequent increase in the pupil-teacher ratio. In the Republic of Korea, until a few years ago, 40 per cent of the classes included more than 70 pupils each; in the Republic of China, 20 per cent had more than 60 pupils each. Overcrowded classrooms at the primary level are indeed a common feature of most Asian cities. But large classes are due not only to teacher shortages but also to shortages of classroom space. In countries such as Cambodia, the Republic of China, Iraq, and the Republic of Korea, primary schools have adopted the shift system with as many as three or four shifts per day. The deleterious effect of a multi-shift schedule on the educational system as a whole is obvious.

In recent years, there has been increasing acceptance in Asian countries of the idea that primary-school teachers should have at least ten years of basic schooling followed by two years of professional training. Though attempts have been made almost everywhere to upgrade teaching qualifications, progress has not always been satisfactory. Almost every country has launched programmes of in-service education for improving the professional qualifications of its teaching personnel. Unfortunately, the backlog of untrained teachers is so large in many Asian States that in-service education is concerned more with the provision of short-term training facilities for such teachers than with the improvement of the professional competence of all the teachers by keeping them abreast of the latest methods and techniques in primary-school teaching.

### **Textbooks and Instructional Materials**

When the educational and professional qualifications of teachers are not high, good textbooks and instructional materials can help to overcome deficiencies. Unfortunately, however, most of the Asian countries are noticeably lacking in the production of primary-school instructional material. In many of them, parents are expected to provide the textbooks. There are even primary schools where only the teacher has a textbook! Special agencies for textbook production have been established by many Asian governments, some of them with the assistance of Unesco or of Unicef. But the problem is of such dimensions that it cannot lend itself to easy solutions.

(Adapted from an article by A. R. Dawood, published in *Prospect in Education*, No. 1, 1969.)



## The Duration and Content of Primary Education in Latin America

1. The diversity of the educational picture presented by the individual countries of Latin America is such that this survey will not pretend to set forth all the characteristics of primary education in each one.

2. The evaluations that follow are intended only to reflect major problems and trends and may not apply with equal validity to every country in the region.

3. Indeed, beyond the problems which characterize the whole region, each country has its own national character and differs from the others not only in its educational system but in many other aspects of its cultural, economic and social life.

### **The Duration of Primary Education**

In almost every country in Latin America, the period of compulsory school attendance coincides with the established duration of the primary-school cycle. In a majority of the countries in question, that period begins at age 7 and ends at age 14. It is important to distinguish, however, between statutory periods of required school attendance and the periods which actually prevail. Among the factors, common to Latin American countries, which account for enormous differences between statutory and actual classroom attendance are: the existence of many rural schools whose attendance requirements are very different from those of urban schools, the general shortage of classroom space, and the prevalence of pupils who leave school prior to the completion of the 'compulsory' cycle.

### **The Rural School Problem**

Not all the school-age population has the opportunity to receive a complete primary education. In many countries, rural school facilities simply do not provide for attendance beyond the third or fourth year of primary education. Consequently, children in rural areas often find access to intermediate or higher education blocked or, at least, extremely difficult. Not only does this represent



a tremendous injustice to those who happen to be born in rural areas, but it also deprives society of the potential intellectual contribution of a considerable sector of the population.

From the point of view of the effectiveness of the rural primary school, the results are equally unsatisfactory. A child who has received so brief a primary education attains only a modest level of development, acquiring only the basic tools of education which simply do not enable him to meet the demands of a modern society. And in not a few instances, by the time he grows up, he has lapsed into illiteracy. The waste of public money implied by this situation is considerable, especially when costly literacy and adult education campaigns are inaugurated in order to correct primary school deficiencies.

### **The Problem of Alternating Classes**

Even where facilities exist for full-cycle primary education, official standards and regulations concerning time-in-class per pupil are often not maintained. One of the major causes of sub-standard performance here is the practice whereby children attend school in shifts with as many as four separate daily time-tables for four separate classes of pupils. This alternating use of classroom space is usually accompanied, as mentioned, by a shortening of the time spent in school by each pupil. Administrators have often resorted to this system in the hope of satisfying vast expansions of enrolment while postponing costly building programmes. These measures were first meant to be temporary, but have, in many cases, become permanent parts of the education system. In view of the expense which modification would entail, this habit would not be easy to change.

### **Incompleted 'Compulsory' Education**

In the last analysis, the most significant index for measuring the real duration of primary schooling is the percentage of pupils who actually complete their primary education. In this respect, many Latin American countries are still faced with serious problems. Despite the fact that the majority of them, in their constitutions or education laws, had already made education compulsory in the nineteenth century or early in the twentieth, a high percentage of the school-age population still does not complete in primary schooling.

Many of the factors which account for this low retention rate come under the heading of inadequate facilities: the critical lack of school buildings, for example, or, particularly in rural areas, an abundance of schools which are not equipped to provide more than three or four grades of primary education (note that rates of completion of primary schooling are based upon a six-year cycle whether or not six grades of schooling are in fact available to the pertinent age-group). Among the other factors responsible for the low rates of primary school completion are: shortcomings in the functioning of



many schools, ill-conceived systems of grade promotion, irregular attendance and the discrepancy between pupils' ages and their grade-levels (it is not unusual for a child to enter grade I at the age of 10 or 11, in which case it is impossible for him to cover the full primary cycle within the legal age limit).

### **The Content of Primary Education**

The content of primary education in Latin America is too vast a subject to be analysed in depth in this brief study. It involves such widely diverse elements as study plans and curricula, teaching methods, structural factors and the nature of teaching materials. An analysis of these diverse elements would be further complicated by the fact that levels of progress in each one vary considerably from country to country. Consequently, the comments that follow have been limited to only two aspects of Latin American primary education ; study plans and curricula, and teacher training. Again, these comments must be qualified by the reminder that they are broad generalizations.

### **Plans and Curricula**

*The goals assigned to Latin American education.* Goals which influence the general content of study plans and curricula, were defined at the regional seminar on the improvement of primary school curricula held in Peru in 1956 under Unesco auspices. These goals, reflected in curricula revisions subsequently implemented by many of the participating countries, were stated as follows :

1. To develop physical and mental health as well as certain manual skills.
2. To develop linguistic skills—speaking, listening, reading, and writing.
3. To ensure a thorough knowledge of mathematical principles and processes—so that the commonest quantitative problems of daily life can be easily solved—and to introduce habits of logical thinking.
4. To ensure an adequate understanding and appreciation of the social environment, especially in regard to cultural traditions, social organization, development of the skills and attitudes required for work in common, the economic life of the community and the nation, and the dignity of labour.
5. To ensure an understanding of the physical world to the extent necessary for satisfactory adjustment to it ; and to lay the foundations of an objective conception of the universe.



6. To develop powers of expression and aesthetic appreciation.
7. To prepare for family responsibilities, and an intelligent use of leisure time.
8. To ascertain the aptitudes and interests of the pupil and guide him towards fields of work in which his talents can be employed to the best advantage of both the individual and the society.
9. To form good habits and attitudes such as punctuality, honesty, truthfulness, tolerance, responsibility, initiative, pride in work well done, sense of honour, etc.
10. To develop the critical faculties, the power of reflection and the sense of moral responsibility.

Despite undeniable improvements in plans and curricula during recent years, they still suffer from drawbacks due mainly to the way in which they are prepared. In countries which have no departments of plans and programmes, formulation and revision are usually entrusted to special commissions composed of teachers, school inspectors and ministerial staff. These meet somewhat irregularly and often lack the participation of other professional and social elements—sociologists, economists, parents, teachers in other branches of education and union representatives.

In many cases, reforms intended to lighten the load of encyclopedic knowledge go too far in the opposite direction, not taking into account the fact that a child must still acquire a minimal store of knowledge adapted to his needs and to his capacities. Moreover, primary-school programmes often tend to be encumbered by an excess of pedagogic guidelines covering activities, teaching methods and objectives of every kind, leaving little room for the teacher's own initiative.

(Adapted from an article by Fose Blat Gimeno published in 'Prospects in Education', No. 1, 1969.)



## Specific Solutions and Adaptations : Application of Rural Education Theory

### **Training of Primary Teachers for Rural Schools**

The Philippines is an outstanding example of a developing country making a serious effort to orient training to the needs of rural school teachers. This rural orientation is a direct result of experiments with the community-school idea conducted throughout the country, albeit with varying degrees of success in different areas.

It is useful to point out at the outset that elementary school-teachers in this country are trained in both public and private institutions, but that the public (or State) institutions produce only about 20 per cent of the total output of teacher graduates. There are six regional public normal colleges, and they follow a curriculum prescribed by the Bureau of Public Schools. There are three other chartered normal colleges and two State universities which also prepare elementary-school teachers, but they are free to have their own curricula. The 250 private teacher-training institutions follow, by and large, the same curriculum as the regional public normal colleges; but they make certain modifications in it with the prior authorization of the Bureau of Private Schools.

There are four aspects of the Bureau of Public Schools programme of elementary-teacher training through which a rural orientation is provided: theoretical courses of study having a direct bearing on rural teaching; curricular activities and experiences intended to prepare teachers for work in rural schools; co-curricular activities having a similar bias; and the student teaching programme.

The first two aspects may be taken together. One course provided is a three-unit course entitled 'Adult and Community Education' which most of the public teacher-training institutions offer as an elective course. It may be pointed out that the various teacher-training institutions are free to organize the detailed syllabus to suit the needs of the schools and the communities in their particular service areas; and most of them actually do this.

The general objectives of this course are to have the student-teachers understand that one of the basic goals of the school is to



eradicate illiteracy and develop functional literacy, and that the final goal of adult and community education is the development of a citizenry that is informed, co-operative and responsible.

The course has ten specific objectives: historical background of adult and community education; basic philosophy and objectives of the course; the economic and social life of the people; the school as the basic agency for the dissemination of civic-cultural-economic information, skills, attitudes and appreciations that affect the improvement of the community; the teachers, in the absence of better trained and larger groups, are more capable in the job of adult and community education; the different government and private agencies engaged in adult and community education; the types of leaders and the kind of leadership needed in the implementation of the adult and community education programme; the types of communities and their different needs; the techniques and methods of the leader in adult and community education programmes; the ways of arousing community interest.

To ensure that the course is not too theoretical, many practical activities are conducted: field trips to pilot schools; conferences with community leaders; making surveys of different aspects of community life; giving various demonstrations for the benefit of the people in the community; organizing adult education classes or participating in various clubs; visiting the homes of adults to neutralize their negative reactions, etc.

Another element in the curriculum of the public regional normal colleges is six units of health education which are provided in two courses of three units each. The first of these two courses is 'Personal and Community Health' and the second is 'Health Education for Community Service'.

A brief description of the latter course as it is given in the Cebu Normal College will serve to give an idea of its relevance to teachers who will be assigned to teach in rural community schools. It has three main aspects: a knowledge of the objectives of health education for Philippine schools; the school health programme; a school-community health survey and action programme.

The study of the objectives of health education also includes a historical survey of health education as it has developed in the country as well as elsewhere. The unit of the school health programme covers school health services, instruction, and healthful school living. The course culminates with the launching of a co-operative school-community health project. An optional fourth unit deals with the setting up of a school-community health council and includes a study of the dynamics of community power and the organization of a health club and health projects.



## Practical Activities

Several practical activities provided in this course may be usefully mentioned here. First, the students are acquainted with the set-up of a school clinic in respect of its personnel, the necessary equipment and facilities, and the services it can render to the school population. Second, they are given an insight into the dynamics of a personal interview so that they are prepared to interview people in the community who are connected with the socio-civic organizations which may be called upon to co-operate in joint school-community health projects; towards the end of the course, actual interviews are conducted by the students. Finally, they are assisted in organizing health projects in the community and in putting forward ideas that will contribute to the welfare of the school and the community.

The public regional normal colleges offer two courses in practical arts—one in handicraft and another is agriculture—both of which are geared to the improvement of the economic life of the community, specially in the rural areas. Prospective teachers are trained in the preparation of household goods and tools, making use of local materials, and in the production of food crops with the use of scientific methods of farming and horticulture. Emphasis is laid on the growth of vegetables suited to the geographical and climatic conditions in the area.

As an example of a course in handicraft, the one-year course offered at the Cebu Normal College is planned to enable teachers to produce handicraft commodities efficiently; to market products effectively; to maintain an attractive school and home environment; to repair furniture and other equipment in the home; to co-operate with other government agencies in the promotion and improvement of home industries; and to exploit the possible correlations of handicraft with science and agriculture.

The course provides the fundamental knowledge, information and skills related to the different activities in handicrafts; stress is laid on the improvement of the physical aspects of the home and its economy, in keeping with the needs of the individual and the community. The projects undertaken seek to develop skill in the use of hand tools and simple machines and in the proper utilization of materials, especially those locally available. The syllabus for the course suggests various types of activities: toy craft; bamboo, coconut-shell and sea-shell craft; hand weaving; woodwork, including wood carving; wire craft; sheet-metal work; book-binding; and home mechanics.

An important objective of the course which makes it particularly useful to rural school-teachers is the improvement of existing home industries through the application of better designs and methods of production. It also attempts to teach prospective teachers how to introduce new industries in their communities.



As an example of a course in agriculture, we may briefly examine the six-unit course offered by the Normal School in Malaybaly, province of Bukidnon. The general objectives of the course from the point of view of the students, are as follows: to learn the principles of animal and plant life; to gain definite experience in agriculture and in the supervision of school and home gardens, agricultural club work, food production projects, orchards, and nursery work, to learn the fundamental principles of landscaping and to participate in the beautification and care of school and community lots and parks; to undertake some farm mechanic work and activities that may generate development of the mechanical abilities of pupils; to know how to take care of farm tools and equipment.

The course consists of several units: general introduction to agriculture, including soil and climate; nursery work and composting; horticulture; forestry; animal husbandry and fish culture; farm mechanics; farm club work and methods of teaching elementary agriculture. In addition to the actual agricultural activities in which students have to participate on the college farm or in the vegetable garden as part of the course in agriculture, the detailed syllabus also suggests activities and experiences that teachers should provide to give their lessons a practical bias: collecting samples of local materials that could be used for handicraft; repair of broken furniture, leaking faucets or basins, and blown-out fuses; constructing fences and trellises; constructing tools out of local materials; collecting information on the financing and marketing of cottage industries; participating in fairs and displays, analysis of soil found on the college campus or in the community to determine its texture and composition; preparation of fertilizers, insecticides and fungicides; visits to nearby stock farms to gather information about various animals; exploration of local or nearby forests for specific species of trees; propagating plants through the distribution of seeds, seedlings, outlings and marcots from the institution's seed bank and nursery to interested members of the community; caponizing chickens and castrating animals for the benefit of members of the community. (It may be pointed out that many of these activities are appropriate for urban schools as well.)

A very useful course for rural school-teachers that used to be offered in the regional normal colleges—it was dropped in the recent revision of the curriculum—was a three-unit course in rural sociology. However, many private teacher-training institutions, such as San Carlos University in Cebu, have retained it either as a required course or as an elective. The course at San Carlos has the following general objectives: to provide a comprehensive knowledge of the cultural background of Philippine rural society; to develop a constructive attitude towards the Filipino farmer and farm labourer; to explain how the interplay of Oriental and Occidental cultures has left the rural Filipino maladjusted; to arouse a keen interest in present-day affairs that affect the economic, political, moral and social life of the country-folk; to emphasize the relationship between urban and rural community ways of life; to give an integrated view of the



fundamental problems which currently confront the Philippines, and to prepare students for an active participation in their solution; and to give prospective teachers practical guidance in the art of living in their respective communities, especially with country people, so as to facilitate social adjustments between them and their pupils and the members of the community which they are to serve.

### **Rural Sociology**

The Normal College in Zamboanga City—which is now a chartered institution with freedom to have its own curriculum—also offers a three-unit course entitled 'Rural Sociology in the Philippine Setting'. This is a study of the various aspects of living in rural areas with emphasis on the region of south-western Mindanao. The students are guided in studying sociological principles and social movements and processes, and in applying them to the local scene in order to gain a better understanding of and a deeper insight into the social and economic problems that beset the country. The course also includes a study of the customs, traditions and group life of rural Filipino people.

Something has also to be said about two courses in home economics for women offered in elementary-teacher training institutions: 'Home and Family Life' and 'Home Economics for Community Services'. These courses emphasize activities and offer opportunities for improving family and community life through the observance of simple scientific rules for nutrition. A new emphasis introduced into the home economics programme of the public regional normal colleges (as a result of a WHO/Unicef/Unesco project on applied nutrition) is the cultivation, in school and home garden plots, of commonly found but previously ignored green leafy vegetables and the use of these in the preparation of school meals aimed at meeting the nutritional needs of school-children. The principal objective of the applied nutrition project in elementary-teacher training institutions in the Philippines is the utilization of the theories learned in agriculture and home economics for increasing the nutritional intake and improving the quality of food of the rural people.

A recent curricular development is the introduction, in some of the regional public normal colleges, of concentration or specialization courses in selected areas of significance for elementary-school teachers. In the catalogue of course offerings of the Pangasinan normal school in Bayambang, twelve such areas are listed; those which would be most useful to teachers in the rural areas are adult and community education, agricultural arts, applied nutrition, health education, home economics and industrial arts. In this college, the choice of one area of specialization is required of each student. Each area or field of concentration has its own set and sequence of courses which have to be taken in addition to the general requirements. Similarly, in the Northern Luzon Teachers' College in Laoag City, concentration courses are also offered but they can be taken only



by certain students who qualify for them on the basis of their scholastic achievement. Four such concentration areas are especially useful to rural school-teachers: adult and community education, agricultural arts, industrial arts and home economics.

Filipino student-teachers are also prepared for serving in rural areas by means of co-curricular activities organized in elementary-teacher training institutions. What follows is a sample gathered from the information provided mainly by the regional public normal schools:

Activities of the regular student organizations in the training institutions, including hobby clubs, social service groups, etc., which have a bearing on rural living.

Participation by the training institutions in activities connected with the local 'fiesta' celebrations, such as games, concerts, dramas, fairs, etc.

Membership in, and/or participation in the activities of/such organizations as the 4-H Club, the Young Farmers' Club and the Future Homemakers' Club.

Organization and operation of a consumers' co-operative in the training institutions.

Participation in drives or campaigns for food production, extermination of pests, conservation of natural resources, better health, beautification of the village, literacy, payment of taxes, etc. organized by community development and welfare agencies working in the area.

Participation in the activities of a rural agricultural club.

Participation in radio and television programmes organized by the teacher-training institutions as part of their programmes for the education of out-of-school youth and adults.

Participation in community socials, picnics, field trips, etc., and in the activities of the community recreation centre or club.

Attendance at rural leadership training camps organized by various youth welfare groups such as the YMCA, the YWCA and other civic action groups, and supported or encouraged by the training institutions.

This list is by no means exhaustive, but it gives an idea of what is being attempted in some institutions to give future teachers a wider orientation to rural education work through programmes of co-curricular activities.

### **Rural Orientation**

Finally, it is necessary to say a few words on the organization of the student teaching programme to show how it contributes to the



preparation of teachers for work in rural schools. Critics of the student teaching programme point out that the vast majority of elementary-school teachers, being trained in institutions located in the big cities, do not get an adequate orientation to rural work even though many of them may be doing their student teaching in rural communities. This is because their student teaching is done without adequate supervision from the college staff. This criticism is directed particularly against the big private institutions (with enrolments of 2,000 to 10,000 students in their departments or colleges of education) which are compelled, because of such a large number of students, to entrust the supervision of student teaching entirely to the co-operating school teachers.

In smaller institutions, however, especially those that are located in smaller centres of population, the student teaching programme tends to be better oriented to the needs of the rural community schools. One training institution has this to say about its off-campus student teaching programme which takes up about eight weeks: 'This period is generally divided into two parts: one half for teaching in a central (elementary) school, and the other half for teaching in a rural school. Some features of the off-campus work are attendance in *barrio* (or village) council sessions, participation in community work by living in the *barrio* itself—as a participant observer, that is.' Another institution believes that 'one of the objectives of internship is to gain an insight into community needs and the role of the school in meeting these needs; community work is, therefore, one of the phases of the internship programme. The student interns have a chance to work with people in the community.'

Our presentation here has been mainly factual and we have attempted to depict those aspects of the total programme that have some relevance to the work of teachers in rural schools. We hope that the picture presented will help teacher educators in other developing countries to appreciate the efforts of their counterparts in the Philippines to give 'a rural bias' to the preparation of elementary-school teachers.

(By Edward A. Pires—a Unesco Expert at Beirut. 'Prospects in Education' No. 2, 1969.)



## Youth and the Human Rights Gap

I do not propose to deal with the nature of the "crisis of youth" which is widespread in the developing and industrialized societies alike, and by no means peculiar to any particular economic system or political regime. I should simply like to make one remark and state one belief.

The remark is that the very term "crisis of youth" which I have used, out of habit, is incorrect. What we are really faced with—and in my view this is what is new and serious—is a *crisis of society*, and this is what young people are trying to bring home to their elders, whether by evasion, challenge or revolt. Youth is questioning the whole basis of society, creating a crisis in society—and not the reverse.

### Creative Force

As for the statement of belief, I am convinced that, confused though they may be, often exaggerated and sometimes misguided—particularly when exploited by persons who are by no means young or innocent—the attitudes and reactions of young people, even the most vigorous challengers of society (in fact, I would say especially its most vigorous challengers) are essentially generous. And this generosity is something that we adults must on no account despise, disappoint or—still worse—suppress. For it represents a creative force that is essential in building a better world.

As for the crisis of human rights—and there can be no question of its existence—it affects both action and thought.

On the factual plane, it is patent that in many places human rights are being openly violated, sometimes by the very people who preach them most ostentatiously. And in our technological civilization, in which productivity and consumption are dominant concerns, these rights are regarded with increasing indifference. The seriousness of this phenomenon, to my mind, is not sufficiently appreciated. What other explanation can there be for the fact that no government has yet ratified the two international covenants—

This article is an abridged version of the address made in Brussels on 10 December 1968 by the Director-General of Unesco at the ceremony organized by the Belgian National Committee for International Human Rights Year, to commemorate the Universal Declaration.



one concerning civil and political rights, the other economic, social and cultural rights—which the General Assembly of the United Nations adopted more than two years ago, on 16 December 1966, and which had taken years and years of painstaking work to draft?

Then, there is an obvious confusion about the very nature of these rights. It has to be recognized that the most basic terms are far from meaning the same thing everywhere and that agreement on certain concepts is often more apparent than real, for the motivations and the ends involved are different. The conference which the United Nations held in Teheran in April 1969 to review the situation twenty years after the adoption of the Declaration was significant in that respect. While the use of a certain vocabulary to express the aspirations of all peoples to freedom and human dignity is now almost universal, it was also apparent that behind the words and phrases used to set forth demands and claims, there is no coherent ideology which is truly common and clear to all.

### **The Gap Between Principles and Reality**

So we have a "crisis of youth" and a crisis of human rights. The reason why I put the two together is that I think they are connected, and that the connections are worth stressing. I believe that youth is challenging society to a large extent because young people feel that, in our present civilization, the individual human being does not have the position or the status he is entitled to.

Today young people are less prepared than ever they were before to put up with the injustices and disorders of the world. And they have never been so widely and so brutally aware of them. The flick of a switch can bring war, misery, oppression, violence and hatred into the home, the club, place of work or common room, harshly projecting it on to the screen or describing it in a voice whose very lack of emotion is offensive. How, in such circumstances, can young people fail to be impressed by the tragic discrepancy between the principles we proclaim and the stark reality of the facts? If we want to prevent a gulf of misunderstanding and distrust developing between the generations it is essential—especially in regard to human rights—that adults (and I refer particularly to those with public responsibilities) should consistently give proof of their sincerity and also of their efficacy. Otherwise, we run the risk that all that is most precious in the spiritual heritage we wish to pass on to our children—a certain idea of Man as a human being—will be rejected as lies and humbug before it has even been tested or critically assessed.

But that is not all; for some young people, what is being questioned is not only our sincerity, our courage and ability to translate our ideals into reality; there are some who deny the existence of Man as a free and responsible being, or who claim that Man develops and asserts himself in ways quite different from those on which the ideology of inborn universal rights is based.



To those who drift into escapism as to those whose attitude is one of utter rejection, we must constantly offer opportunities for discussion and participation—and I mean *real* discussion and *real* participation, not just a semblance.

Of course, young people are not always right. Indeed, except on specific problems affecting them personally, such as education and leisure time facilities, they feel rather than understand. How could it be otherwise? The uneasiness of their quest is sufficient to show that they, too, have not found an answer to the human problems which they reproach us for not having discovered or applied; it would therefore be absurd for us to abdicate our responsibilities towards them.

### **Youth in Partnership**

But at a time when young people account for more than a third of the total world population—in some countries, nearly half—and when intellectually they are developing much earlier, it is all the more natural and necessary that we should make them our partners in so fundamental a matter as human rights where their enthusiasm and inventiveness could be of real value. In the past, adults too often held that young people should wait for their turn, except, of course, when it came to throwing them into wars arising from a clash which they had had no part in trying to settle by peaceful means.

I for one have chosen to make Unesco more accessible to young people, so as to give them the greatest possible share in the Organization's activities, both at the planning and implementation stage; and the General Conference, at its last session, approved my proposals. It is now for youth to respond to the various opportunities which are being offered to it in the wide field of international intellectual co-operation.

[Unesco Features Nos. 542/543—January (I/II) 1969].]



## The Roots of the Present Student Unrest

Over the last two centuries, the young, considered as a specific age-group, have been constantly acquiring more and more importance and independence. This new significance of youth was clearly reflected in the entire Romantic movement, and from the end of the eighteenth century onwards many references can be found to youth as a force for renewal. More specifically, educationists, from Rousseau to the theoreticians of the new school, have tended to make youth the centre and agents of education.

### **From Boy Scouts to Teddy Boys**

In the last years of the nineteenth century, this revolution was crystallized in institutions such as the "School Republics" in the United States of America and the early youth movements, such as the Boy Scouts and the Wandervogel. It took firm root between World Wars I and II; this was the period when the International Bureau of Education launched the Iena Plan, which attempted to establish a genuine tradition of teaching by older children in single-teacher primary schools; this was also the time when experiments were tried out in certain Czechoslovak secondary schools, where the pupils were responsible for the management of their own establishments: above all, it was flourishing period of youth organizations.

In 1945, these fell into the same disrepute as the totalitarian regimes with which the most typical of them had been associated. But the use to which these youth movements were at one time put should not blind us to their importance. Young people had grown accustomed to living together, organizing themselves, running their own affairs and asserting their claims. However questionable it might be in many respects, a mystique of youth had been created. When the totalitarian youth movements disappeared, they were not replaced by new associations. But the young were still there and were less and less willing to occupy the place on the fringe of society to which they had been relegated.

Between 1950 and 1960, adults were much concerned with the phenomenon of juvenile delinquency, which was supposed to stem



from all kinds of secondary causes (housing conditions, the influence of films and popular literature, the weakening of family bonds); but no one thought to see the phenomenon as a symptom of the basic anxiety of an entire age-group. By spotlighting the extreme case of "delinquent" youth, the youth problem as a whole was overlooked. The appearance on the scene of the "teddy boys", however, showed that the rebelliousness had become "endemic". The "hippy" phenomenon, though less aggressive, was in fact of greater significance, and revealed that a section of youth had rejected the "consumer society" in all its forms, cultural and moral, as well as political or economical. The student revolt is clearly only the most recent of these phenomena and, if we isolate it from its historical context, we are unlikely to find any real solution to it.

### **Numbers and Prestige**

The attention accorded to young people and their growing importance and independence seem to be closely linked to the development of an industrial society, first in Europe, and later throughout the world. It is natural that in a rapidly changing society the gap between the generations should widen. The population factor has recently added to this acceleration of cultural change. The young today are not only proportionately more numerous than they were twenty years ago, they also play a far larger part in the economy of consumer society, as must be plain to anyone who looks at commercial advertisements. Above all, youth has enhanced prestige: culturally, it represents an enviable state to which we cling as long as we possibly can, and which has our sympathy. Thus, the main body of youth as such is reinforced by a host of sympathizers.

In the attack launched by the young against adult society, students form the general staff and the shock troops. Their rebellion is therefore not an isolated phenomenon; it is an example, and a particularly striking symptom, of the anxiety felt by young people in regard to a society which seems incapable of properly integrating them. The student revolt in the universities shows a certain basic unity, even though it takes widely different and sometimes contradictory forms. On the one hand, the students want to be recognized as a broadly independent social group, on the other, they oppose, either violently or peaceably, a society and a culture, which, rightly or wrongly, they consider to be absurd.

### **Wholesale Rejection of Middle-Class Values**

The small intellectual groups which in many countries set the style for the student movement tend to develop an international youth culture in the fields of art, ideology and morals, in complete contrast to adult culture. They not only question academic culture which they regard as completely out-of-date, but also the avant-garde culture of adults. Established writers, thinkers and artists find scant favour in their eyes; plays considered by the "bourgeois" public as offensive



are in turn denounced by the young as bourgeois. And it is characteristic that while students are perfectly familiar with avant-garde adult culture propagated by publicity media, commercial or otherwise, educated adults are generally out of touch with the culture of the young. The "Living Theatre" or the poetry of the "beat generation", for instance, were typically youthful phenomena; at the ideological level H. Fromm, W. Reich and H. Marcuse, who have long ranked among the intellectual mentors of rebellious youth were, until recently, practically unknown to the non-specialist adult public. Finally, we may note that, for the young, culture no longer means a sort of literary and artistic embellishment of our lives; it is a way of life. It is here, perhaps, that the sharpest clashes occur, particularly over the ethics of work and "success", rules of sexual behaviour, and patterns of human relationships.

Students are, therefore, challenging the whole fabric of present-day society; they do not limit their demand to a few minor reforms, but call for a radical transformation. They share, with considerable theoretical or practical variants, a number of common ideas: distaste for the cheap glitter of a commercial society which leads to alienation in the sociological and psychiatric senses of the word, questioning of a university education which aims at turning students into the future leaders of this alienated society, desire to give free rein to their imagination and instincts in spite of all "repressions", refusal to separate work and leisure, and rejection of consumer culture.

Needless to say, these ideas first breed among tiny minorities in industrially developed countries, and under ordinary circumstances, most students know nothing about them, or, if they hear of them, reject them. However, in times of demonstrations and clashes with the authorities, they appear to be very quickly accepted. The conclusion would seem to be that these extremist ideas reflect the innermost preoccupations of young people as a whole. Even though the avant-garde groups do not always provide practical solutions that are ultimately acceptable to the majority, they do often put forward an ideological programme which excites keen interest among all students.

### **Seeing the Young as They Really Are**

It is probably on this point that the authorities, educators and adults in general fall into serious errors of judgment. They readily admit that problems do exist, but they are reluctant to allow the young themselves to pose these problems. Here, as in all other educational matters, they claim to know better: they themselves would like to pinpoint youth's problems and to reduce them to what they would like them to be, to something which would be comprehensible and acceptable to them.

The same story is repeated in one country after another: when disturbances arise, a handful of "agitators" or "ringleaders" are



singled out and carefully dissociated from the "vast majority of students", who are said to be "reasonable" (meaning here that their thoughts and those of adults are basically on the same wave-length). This so-called "reasonable" majority soon makes common cause with the ringleaders and unrest grows; the adults resort in turn to force and old-fashioned manoeuvring. It is an historical fact that repression never seems to have succeeded in providing a lasting solution to student problems. But manoeuvring, when it comes to education, is no better: it ends by creating mutual misunderstanding, increasing opposition, confusing the issue and therefore postponing a real solution. If there is one sphere in which it is impossible to cheat with impunity, it is certainly that of education.

Perhaps the first step towards the solution of the student problem should be for adults to stop and think about their own attitudes, their secret fears, and their inhibitions in their dealings with the younger generation, and so come to see, if not to accept, the young as they really are, and not as they, the adults, would like them to be.

[By Jacques Bousquet, Deputy Director of Unesco's Division on Educational Planning, UNESCO FEATURES, No. 540, December (I), 1968.]



## What Exactly Do They Want?

### The Main Lines of the Student Demands

Barely a year ago, student demonstrations were regarded as local incidents caused by special university or political conditions. Today one can speak with some justification of a world-wide movement; it has spread to many very different countries on all continents—capitalists and socialist, liberal and authoritarian, rich and poor.

If we wish to turn to good use the ideas and forces released by the student unrest, we must first look more closely at what exactly the students themselves are asking for, and what kind of university they would like to see in the future. Obviously their demands vary from one country to another and change between one crisis and the next. But here are some of the themes which crop up frequently in student claims.

### Participation : A 'Must'

First of all, the students insist on their *participation* in the education they receive. This is their fundamental claim and, in a sense, it includes all the others. It is a claim that goes far : indeed, in many cases, representation on the university or faculty council no longer satisfies students today. They demand a say in the creation of new university structures, they wish to take part in the planning of higher education as related both to social demand and to economic requirements, they want to discuss curricula and teaching methods. Moreover, they will not agree that such participation should conform to bureaucratic or hierarchical patterns : they call for *direct and permanent democracy*. They believe that participation should begin in the classroom and that teaching should be a *joint venture of professors and students*. This, in a way, is the application at university level of the principles of the active method which many educationists have been recommending for years; it would also be an initial experiment, in the propitious setting of the university, of a society without *classes or constraint*.

### Team-Work

Thus participation should have the effect of demolishing the watertight barriers between student and professor. It would mean



## WHAT EXACTLY DO THEY WANT ?

the end of professorial "pontificating", of the "high table" mentality, of "university feudalism". A more important role would devolve upon assistant lecturers, acting as intermediaries between professors and students; the latter would participate directly in the actual instruction—through team-work and advanced students acting as tutors for their younger fellow-students, etc. In some universities this has already been the practice for a long time and if it became the general rule, it would help to remedy the shortage of teaching staff and overcrowding of classes.

## Life-Long Education and People's Universities

The principle of *teacher and taught*, as understood by the more advanced students, is not confined to the university. It can have very important implications for secondary and primary education, for young workers' education, for aid to developing countries, and life-long education.

For a long time now, there have been teacher-training colleges with primary schools attached to them; students advocate the establishment of higher and secondary establishments where, from their second year at the university onwards, all students (and not only those intending to become teachers) would do a certain amount of teaching; some groups have suggested that "autonomous universities", run by the students and teaching staff, should establish institutions of this kind; they would be voluntary socio-cultural services and not, in any way, part of the Establishment.

One of the major concerns of the protest groups is to keep in touch with young workers; among the practical suggestions they have put forward is that the autonomous universities should set up people's universities, and start evening or holiday courses; these would be run jointly by volunteer students and teachers on the one hand and by young workers on the other.

The students are also very eager to be of practical use to the developing countries, perhaps through an increase in the long-term voluntary service programmes which already exist in some countries (in some cases replacing military service). One suggestion is that such aid could be given through the medium of an international organization.

Finally, the slogan "teacher and taught" is closely related to the concept of life-long education, to which planning specialists are paying increasing attention.

## No More Watertight Compartments

A fourth category of demands concerns the content of university education. Here, the fundamental idea is that the system should give more emphasis to the true pre-occupations of youth in all spheres: cultural, personal, social, political and vocational. This does not



mean that the usual lectures should be replaced by discussions on university life. But students would like to see less dividing up of subjects into watertight compartments (for example, divisions between literature, art, history of ideas, economic history, etc.); they want the ideas and facts of the past to be tackled more frankly, from the point of view of their own period; they want a revaluation of the standards of aesthetic, philosophical and moral values, which would highlight their most urgent problems. In physics and mathematics, and in the applied sciences, they would like the university not merely to train specialists, but to do this in the context of general education in the political, social, economic and personal problems which they are likely to encounter in their day-to-day professional lives.

### A 'New Look' for the University

The fifth set of demands concerns the university way of life. Students are scathing about the solemn rituals (gowns, robes, titles, etc.) which seem to them old-fashioned and, in their opinion, militate against communication between teacher and pupil. They have little time for the palatial appearance of many university buildings which, they maintain, contributes to the isolation of the university from the outside world, especially in the poorer countries. They rebel, in particular, against the "barrack room" or "convent" discipline which, they claim, prevails in student hostels, notably in regard to sexual segregation. The students see sexual liberation as closely linked to social and political liberation. The kind of freedom they seek is by no means licence, and they have, as a general rule, little esteem for the eroticism of "capitalist society". We may be shocked by their morals, but it is nevertheless morality of a kind.

### A Cross-Fertilization Process

The student movement is distinctly international in character, and a student revolt in one country has immediate repercussions in others. Students refuse to consider their struggle as a purely national affair and welcome leaders and comrades-at-arms from other countries. They would like to see an increase in exchanges, a cross-fertilization between universities. Among other things, they demand that students or professors who have been compelled to leave their own university should automatically be received in the universities of neighbouring countries. In this way, the university would be reassuming its original character, for, in both the Arab and Christian worlds, universities were at the outset international institutions. In Europe, the mediaeval brotherhoods of professors and students (*universitates professorum atque alumnorum*) were open to students of all nationalities: in Padua or Paris, for instance, most students were foreign. The international student movement offers exceptional opportunities for international understanding, for genuine education for peace and for co-operation between the wealthy countries and those of the Third World.



**Education : An End in Itself**

There remains the problem of employment. Most students, taken individually, are undoubtedly concerned about their future. Yet employment problems are not always in the forefront of their demands. In some countries, notably France, students as a rule reject the idea of selection for university entrance, which might possibly protect them from undue competition; they refuse to accept that the number of students admitted should be linked to the manpower estimates of the "technocrats". They believe that vocational guidance should be creative and individual; that it should help them to discover and confirm their natural bent and not merely select and classify them after the event, like cattle. Similarly, the examination system should no longer be a filtering process designed to single out a small graded elite whose diplomas give them an entrée to the best jobs. Examinations should be either abolished entirely, or else simplified by eliminating as far as possible the chance factor, examination fever and learning by rote, and by student participation in the choice of questions and even representation on the boards of examiners. In any case, the students are against any university that merely prepares students for examinations : they believe that education should be an end in itself.

[By Jacques Bousquet, UNESCO FEATURES, No, 541, December (II), 1969.]



## The Open University

When Britain's Open University goes on the air next January, it will not be the first time that broadcasting has been used in the service of higher education. Nor, despite its original name, "The University of the Air", is it a university in which all the teaching will be done by television. Part will be by radio and television, part by correspondence course material, by home experimental kits, by audio tapes, by programmed learning texts, by summer schools, by tuition in viewing and study centres: the University is indeed quite Open as to the teaching methods it will use.

More important—and this is its main originality—it is Open to all students; no formal qualifications, no testimonials are needed; there is no age bar (provided you are 21 or over), no sex bar, no residential bar.

So far, more than 35,000 people have applied for enrolment in the courses beginning in 1971, so it is perhaps churlish to question the need for the Open University. In any case, the facts behind the decision to create the University are these: Britain's university system is elitist; despite the existence of many "new universities", there are still too few places for all school-leavers qualified for higher education, and the result is that a large number of them go straight into employment every year because no university has room for them. The promoters of the Open University believe that if only 10% of this untapped brain power can take advantage of its facilities, it will be a significant and socially positive achievement.

What are the Open University's other characteristics? In the first place its students will be part-time, a situation allowed to only about 3% of students at undergraduate level in other British universities. Most adults could not afford to stop work for three years to become full-time students, and in addition their contribution to the national product would be lost if they did. They will take courses which will normally run from January to December, not October to July, and a year's course in one subject (10 hours a week for 36 weeks of the year, plus attendance at summer school and examinations) will count as one credit; six credits will earn him a general degree and eight credits an honours degree. One or two courses (but



not more) may be taken in a year. An exceptionally hard-working student might obtain a degree in 3 years, but 4 or 5 years is more likely. There is no time-limit involved, so that a person who needs to interrupt his studies will be at liberty to do so.

A further innovation is that an inter-disciplinary approach will be built into the Open University from the start, and the courses themselves will integrate studies which are often separated traditionally. "Foundation Courses" in Humanities, Mathematics, Social Science and Science, in two of which students must gain credits before proceeding to further courses, initiate this process. "Science", for example, combines a study of chemistry, geology, physics and biology, set firmly into a social framework, and "Understanding Society" combines psychology, sociology, economics and social anthropology. The Science Foundation Course incidentally includes an analysis of atmospheric pollution: students will be provided with a kit to record the make-up of the air on their own doorsteps, yielding valuable data on pollution all over the British Isles as a by-product.

These new courses are likely to prove exciting to students and teachers alike, and already some interesting new ground has been covered. The Mathematics Faculty, in preparing a completely new Foundation Course in Mathematics, found itself without any acceptable existing textbooks, and has therefore launched on the vast but rewarding task of preparing a new introduction to the subject from scratch.

The Humanities Course consists mainly of a series of case-studies: Socrates, the Gospel of St. Mark, Vasari's *Lives of the Artists*, *Hamlet*, Descartes, Mendelssohn's Rediscovery of the Music of Bach, culminating in an extended study of the cultural implications of industrialization. Thus music, too often sealed off in a separate faculty, takes its rightful place among the Humanities, for the Mendelssohn case-study, treated first of all as a problem in music and musicology, will serve as a point of entry into the whole question of Romanticism, standards of bourgeois taste, and so on. Foundation Course will be offered from 1972 in Technology.

One further line, Educational Studies, which is expected to make a special contribution to in-service training and upgrading of those with previous experience or knowledge, will offer no Foundation Course, but will concentrate on courses at the second level and beyond.

### **2.6% of Applicants—Workers**

Who are the students of the Open University likely to be? An analysis of the first 30,000 applications show that almost 40% are from teachers, 11.2% from professional people, 9.6% from housewives, 6.5% from administrators and managers, and the same number



from scientists and engineers. In addition, 6.4% came from draughtsmen, laboratory assistants and technicians, 7.5% from clerical and office staff, and 1.8% from members of the armed forces. But only 2.6% came from workers in manufacturing industry, mining, construction and transport, 1.4% from workers in the electrical, metal and allied trades, and 3.1% from shopkeepers and workers in sales and service industries. It is thus likely that a quota system will be introduced to ensure that every category of applicants receives an allocation of places.

The important thing is that the Open University will offer the opportunity of higher education to people who have never had that before. Others will not have wanted higher education at an earlier age, but have come to see themselves as unfulfilled and underdeveloped without it. Some may not want a degree, but see some courses as relevant to their professional advancement, giving them a qualification they lack, or updating knowledge which has become increasingly anachronistic since they originally acquired it.

Some critics have suggested that the Open University is an extravagant way of producing graduates. But, even assuming a drop-out rate as high as that of existing correspondence colleges (in which the correspondence teaching has no reinforcement from broadcasting, tutorial services or summer schools), the graduates will each cost very much less than the cost per graduate of the other universities. If allowance is made for the estimated income from fees (each student will pay £140—£170 for a full degree course, often partly or wholly reimbursed by his employer or local education authority), and from the marketing for the University course materials, the net cost per graduate may well be lower. And this is of course to ignore the benefit obtained by the estimated 200,000 "eavesdroppers" who are expected to follow the radio and television parts of the courses without actually enrolling, and by the "drop-outs" who qualify for one or more credits but do not wish to continue to a full degree.

### Package Courses

Nor will the benefit of the Open University courses stop there: in a sense, it will remain Open even outside the United Kingdom. There are many places, and not all of them in the underdeveloped parts of the world, where needs for education outstrip the supply of staff and facilities. The OU package courses are easily exported, and institutions in other countries will be able to secure them for their own use. The idea of the Open University was born in minds in the United Kingdom who recognized the significance of educational development using broadcasting and correspondence in other parts of the world. It will perhaps be a mode of repaying that debt if the Open University can make a contribution beyond the shores of the country in which it is established.

[By Prof. Walter James, Director of Studies at the Open University, UNESCO FEATURES No. 578/579, July (I/II) 1970.]



## Status of Teachers

### **Recommendation of an Intergovernmental Conference (1966)**

In the autumn of 1966, a special Intergovernmental Conference met in Paris, on the initiative of Unesco and with the active co-operation of the International Labour Organisation, to consider the problems raised by the status of teachers. It was attended by representatives of seventy-five States and by observers from a number of international organizations. At the conclusion of its discussions the conference unanimously adopted a text known as the 'Recommendation Concerning the Status of Teachers'.

The Special Intergovernmental Conference on the Status of Teachers, recalling that the right to education is a fundamental human right,

Conscious of the responsibility of the States for the provision of proper education for all in fulfilment of Article 26 of the Universal Declaration of Human Rights, of Principles 5, 7 and 10 of the Declaration of the Rights of the Child and of the United Nations Declaration concerning the Promotion among Youth of the Ideals of Peace, Mutual Respect and Understanding between Peoples,

Aware of the need for more extensive and widespread general and technical and vocational education, with a view to making full use of all the talent and intelligence available as an essential contribution to continued moral and cultural progress and economic and social advancement,

Recognizing the essential role of teachers in educational advancement and the importance of their contribution to the development of man and modern society,

Concerned to ensure that teachers enjoy the status commensurate with this role,

Taking into account the great diversity of the laws, regulations and customs which, in different countries, determine the patterns and organization of education,

Taking also into account the diversity of the arrangements which in different countries apply to teaching staff, in particular according



to whether the regulations concerning the public service apply to them,

Convinced that in spite of these differences similar questions arise in all countries with regard to the status of teachers and that these questions call for the application of a set of common standards and measures, which it is the purpose of this Recommendation to set out,

Noting the terms of existing international conventions which are applicable to teachers, and in particular of instruments concerned with basic human rights such as the Freedom of Association and Protection of the Right to Organize Convention, 1948, the Right to Organize and Collective Bargaining Convention, 1949, the Equal Remuneration Convention, 1951, and the Discrimination (Employment and Occupation) Convention, 1958, adopted by the General Conference of the International Labour Organisation, and the Convention against Discrimination in Education, 1960, adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization,

Noting also the recommendations on various aspects of the preparation and the status of teachers in primary and secondary schools adopted by the International Conference on Public Education convened jointly by the United Nations Educational, Scientific and Cultural Organization and the International Bureau of Education, and the Recommendation concerning Technical and Vocational Education, 1962, adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization,

Desiring to supplement existing standards by provisions relating to problems of peculiar concern to teachers and to remedy the problems of teacher shortage,

Has adopted this Recommendation :

## **I. Definitions**

1. For the purpose of this Recommendation :
  - (a) The word 'teacher' covers all those persons in schools who are responsible for the education of pupils ;
  - (b) The expression 'status' as used in relation to teachers means both the standing or regard accorded them, as evidenced by the level of appreciation of the importance of their function and of their competence in performing it, and the working conditions, remuneration and other material benefits accorded them relative to other professional groups.

## **II. Scope**

2. This Recommendation applies to all teachers in both public and private schools up to the completion of the secondary stage of education, whether nursery, kindergarten,



primary, intermediate or secondary, including those providing technical, vocational, or art education.

### III. Guiding Principles

3. Education from the earliest school years should be directed to the all-round development of the human personality and to the spiritual, moral, social, cultural and economic progress of the community, as well as to the inculcation of deep respect for human rights and fundamental freedoms; within the framework of these values the utmost importance should be attached to the contribution to be made by education to peace and to understanding, tolerance and friendship among all nations and among racial or religious groups.
4. It should be recognized that advance in education depends largely on the qualifications and ability of the teaching staff in general and on the human, pedagogical and technical qualities of the individual teachers.
5. The status of teachers should be commensurate with the needs of education as assessed in the light of educational aims and objectives; it should be recognized that the proper status of teachers and due public regard for the profession of teaching are of major importance for the full realization of these aims and objectives.
6. Teaching should be regarded as a profession; it is a form of public service which requires of teachers expert knowledge and specialized skills, acquired and maintained through rigorous and continuing study; it calls also for a sense of personal and corporate responsibility for the education and welfare of the pupils in their charge.
7. All aspects of the preparation and employment of teachers should be free from any form of discrimination on grounds of race, colour, sex, religion, political opinion, national or social origin, or economic condition.
8. Working conditions for teachers should be such as will best promote effective learning and enable teachers to concentrate on their professional tasks.
9. Teachers' organizations should be recognized as a force which can contribute greatly to educational advance and which therefore should be associated with the determination of educational policy.

### IV. Educational Objectives and Policies

10. Appropriate measures should be taken in each country to the extent necessary to formulate comprehensive educational



policies consistent with the Guiding Principles, drawing on all available resources, human and otherwise. In so doing, the competent authorities should take account of the consequences for teachers of the following principles and objectives :

- (a) It is the fundamental right of every child to be provided with the fullest possible educational opportunities; due attention should be paid to children requiring special educational treatment ;
- (b) All facilities should be made available equally to enable every person to enjoy his right to education without discrimination on grounds of sex, race, colour, religion, political opinion, national or social origin, or economic condition ;
- (c) Since education is a service of fundamental importance in the general public interest, it should be recognized as a responsibility of the State, which should provide an adequate network of schools, free education in these schools and material assistance to needy pupils; this should not be construed so as to interfere with the liberty of the parents and, when applicable, legal guardians to choose for their children schools other than those established by the State, or so as to interfere with the liberty of individuals and bodies to establish and direct educational institutions which conform to such minimum educational standards as may be laid down or approved by the State ;
- (d) Since education is an essential factor in economic growth, educational planning should form an integral part of total economic and social planning undertaken to improve living conditions ;
- (e) Since education is a continuous process the various branches of the teaching service should be so co-ordinated as both to improve the quality of education for all pupils and to enhance the status of teachers ;
- (f) There should be free access to a flexible system of schools, properly interrelated, so that nothing restricts the opportunities for each child to progress to any level in any type of education ;
- (g) As an educational objective, no State should be satisfied with mere quantity, but should seek also to improve quality ;
- (h) In education both long-term and short-term planning and programming are necessary; the efficient integration in



the community of today's pupils will depend more on future needs than on present requirements ;

- (i) All educational planning should include at each stage early provision for the training, and the further training, of sufficient numbers of fully competent and qualified teachers of the country concerned who are familiar with the life of their people and able to teach in the mother tongue ;
- (j) Co-ordinated systematic and continuing research and action in the field of teacher preparation and in-service training are essential, including, at the international level, co-operative projects and the exchange of research findings ;
- (k) There should be close co-operation between the competent authorities, organizations of teachers, of employers and workers, and of parents as well as cultural organizations and institutions of learning and research, for the purpose of defining educational policy and its precise objectives ;
- (l) As the achievement of the aims and objectives of education largely depends on the financial means made available to it, high priority should be given, in all countries, to setting aside, within the national budgets, an adequate proportion of the national income for the development of education.

## **V. Preparation for the Profession**

### *Selection*

- 11. Policy governing entry into preparation for teaching should rest on the need to provide society with an adequate supply of teachers who possess the necessary moral, intellectual and physical qualities and who have the required professional knowledge and skills.
- 12. To meet this need, educational authorities should provide adequate inducements to prepare for teaching and sufficient places in appropriate institutions.
- 13. Completion of an approved course in an appropriate teacher-preparation institution should be required of all persons entering the profession.
- 14. Admission to teacher preparation should be based on the completion of appropriate secondary education, and the evidence of the possession of personal qualities likely to help the persons concerned to become worthy members of the profession.



15. While the general standards for admission to teacher preparation should be maintained, persons who may lack some of the formal academic requirements for admission, but who possess valuable experience, particularly in technical and vocational fields, may be admitted.
16. Adequate grants or financial assistance should be available to students preparing for teaching to enable them to follow the courses provided and to live decently; as far as possible, the competent authorities should seek to establish a system of free teacher-preparation institutions.
17. Information concerning the opportunities and the grants or financial assistance for teacher preparation should be readily available to students and other persons who may wish to prepare for teaching.
18. (1) Fair consideration should be given to the value of teacher-preparation programmes completed in other countries as establishing in whole or in part the right to practise teaching.  
(2) Steps should be taken with a view to achieving international recognition of teaching credentials conferring professional status in terms of standards agreed to internationally.

#### *Teacher-preparation Programmes*

19. The purpose of a teacher-preparation programme should be to develop in each student his general education and personal culture, his ability to teach and educate others, an awareness of the principles which underlie good human relations, within and across national boundaries, and a sense of responsibility to contribute both by teaching and by example to social, cultural, and economic progress.
20. Fundamentally, a teacher-preparation programme should include :
  - (a) General studies ;
  - (b) Study of the main elements of philosophy, psychology, sociology as applied to education, the theory and history of education, and of comparative education, experimental pedagogy, school administration and methods of teaching the various subjects ;
  - (c) Studies related to the student's intended field of teaching ;
  - (d) Practice in teaching and in conducting extra-curricular activities under the guidance of fully qualified teachers.



21. (1) All teachers should be prepared in general, special and pedagogical subjects in universities, or in institutions on a level comparable to universities, or else in special institutions for the preparation of teachers.  
(2) The content of teacher-preparation programmes may reasonably vary according to the tasks the teachers are required to perform in different types of schools, such as establishments for handicapped children or technical and vocational schools. In the latter case, the programmes might include some practical experience to be acquired in industry, commerce or agriculture.
22. A teacher-preparation programme may provide for a professional course either concurrently with or subsequent to a course of personal academic or specialized education or skill cultivation.
23. Education for teaching should normally be full time; special arrangements may be made for older entrants to the profession and persons in other exceptional categories to undertake all or part of their course on a part-time basis, on condition that the content of such courses and the standards of attainment are on the same level as those of the full-time courses.
24. Consideration should be given to the desirability of providing for the education of different types of teachers, whether primary, secondary, technical, specialist or vocational teachers, in institutions organically related or geographically adjacent to one another.

#### *Teacher-preparation Institutions*

25. The staff of teacher-preparation institutions should be qualified to teach in their own discipline at a level equivalent to that of higher education. The staff teaching pedagogical subjects should have had experience of teaching in schools and wherever possible should have this experience periodically refreshed by secondment to teaching duties in schools.
26. Research and experimentation in education and in the teaching of particular subjects should be promoted through the provision of research facilities in teacher-preparation institutions and research work by their staff and students. All staff concerned with teacher education should be aware of the findings of research in the field with which they are concerned and endeavour to pass on its results to students.
27. Students as well as staff should have the opportunity of expressing their views on the arrangements governing the life, work and discipline of a teacher-preparation institution.



28. Teacher-preparation institutions should form a focus of development in the education service, both keeping schools abreast of the results of research and methodological progress, and reflecting in their own work the experience of schools and teachers.
29. The teacher-preparation institutions should, either severally or jointly, and in collaboration with another institution of higher education or with the competent education authorities, or not, be responsible for certifying that the student has satisfactorily completed the course.
30. School authorities, in co-operation with teacher-preparation institutions, should take appropriate measures to provide the newly-trained teachers with an employment in keeping with their preparation, and individual wishes and circumstances.

### **I. Further Education for Teachers**

31. Authorities and teachers should recognize importance of in-service education designed to secure a systematic improvement of the quality and content of education and of teaching techniques.
32. Authorities, in consultation with teachers' organizations, should promote the establishment of a wide system of in-service education, available free to all teachers. Such a system should provide a variety of arrangements and should involve the participation of teacher-preparation institutions, scientific and cultural institutions, and teachers' organizations. Refresher courses should be provided, especially for teachers returning to teaching after a break in service.
33. (1) Courses and other appropriate facilities should be so designed as to enable teachers to improve their qualifications, to alter or enlarge the scope of their work or seek promotion and to keep up to date with their subject and field of education as regards both content and method.  
  
(2) Measures should be taken to make books and other material available to teachers to improve their general education and professional qualifications.
34. Teachers should be given both the opportunities and the incentives to participate in courses and facilities and should take full advantage of them.
35. School authorities should make every endeavour to ensure that schools can apply relevant research findings both in the subjects of study and in teaching methods.



36. Authorities should encourage and, as far as possible, assist teachers to travel in their own country and abroad, either in groups or individually, with a view to further their education.
37. It would be desirable that measures taken for the preparation and further education of teachers should be developed and supplemented by financial and technical co-operation on an international or regional basis.

## **VII. Employment and Career**

### *Entry into the Teaching Profession*

38. In collaboration with teachers' organizations, policy governing recruitment into employment should be clearly defined at the appropriate level and rules should be established laying down the teachers' obligations and rights.
39. A probationary period on entry to teaching should be recognized both by teachers and by employers as the opportunity for the encouragement and helpful initiation of the entrant and for the establishment and maintenance of proper professional standards as well as the teacher's own development of his practical teaching proficiency. The normal duration of probation should be known in advance and the conditions for its satisfactory completion should be strictly related to professional competence. If the teacher is failing to complete his probation satisfactorily, he should be informed of the reasons and should have the right to make representations.

### *Advancement and Promotion*

40. Teachers should be able, subject to their having the necessary qualifications, to move from one type or level of school to another within the education service.
41. The organization and structure of an education service, including that of individual schools, should provide adequate opportunities for and recognition of additional responsibilities to be exercised by individual teachers, on condition that those responsibilities are not detrimental to the quality or regularity of their teaching work.
42. Consideration should be given to the advantages of schools sufficiently large for pupils to have the benefits and staff the opportunities to be derived from a range of responsibilities being carried by different teachers.
43. Posts of responsibility in education, such as that of inspector, educational administrator, director of education or other posts of special responsibility, should be given as far as possible to experienced teachers.



44. Promotion should be based on an objective assessment of the teacher's qualifications for the new post, by reference to strictly professional criteria laid down in consultation with teachers' organizations.

#### *Security of Tenure*

45. Stability of employment and security of tenure in the profession are essential in the interests of education as well as in that of the teacher and should be safeguarded even when changes in the organization of or within a school system are made.
46. Teachers should be adequately protected against arbitrary action affecting their professional standing or career.

#### *Disciplinary Procedures related to Breaches of Professional Conduct*

47. Disciplinary measures applicable to teachers guilty of breaches of professional conduct should be clearly defined. The proceedings and any resulting action should only be made public if the teacher so requests, except where prohibition from teaching is involved or the protection or well-being of the pupils so requires.
48. The authorities or bodies competent to propose or apply sanctions and penalties should be clearly designated.
49. Teachers' organizations should be consulted when the machinery to deal with disciplinary matters is established.
50. Every teacher should enjoy equitable safeguards at each stage of any disciplinary procedure, and in particular :
  - (a) The right to be informed in writing of the allegations and the grounds for them ;
  - (b) The right to full access to the evidence in the case ;
  - (c) The right to defend himself and to be defended by a representative of his choice, adequate time being given to the teacher for the preparation of his defence ;
  - (d) The right to be informed in writing of the decisions reached and the reasons for them ;
  - (e) The right to appeal to clearly designated competent authorities or bodies.
51. Authorities should recognize that effectiveness of disciplinary safeguards as well as discipline itself would be greatly enhanced if the teachers were judged with the participation of their peers.



52. The provisions of the foregoing paragraphs 47—51 do not in any way affect the procedures normally applicable under national laws or regulations to acts punishable under criminal laws.

### *Medical Examinations*

53. Teachers should be required to undergo periodical medical examinations, which should be provided free.

### *Women Teachers with Family Responsibilities*

54. Marriage should not be considered a bar to the appointment or to the continued employment of women teachers, nor should it affect remuneration or other conditions of work.
55. Employers should be prohibited from terminating contracts of service for reasons of pregnancy and maternity leave.
56. Arrangements such as creches or nurseries should be considered where desirable to take care of the children of teachers with family responsibilities.
57. Measures should be taken to permit women teachers with family responsibilities to obtain teaching posts in the locality of their homes and to enable married couples, both of whom are teachers, to teach in the same general neighbourhood or in one and the same school.
58. In appropriate circumstances women teachers with family responsibilities who have left the profession before retirement age should be encouraged to return to teaching.

### *Part-time Service*

59. Authorities and schools should recognize the value of part-time service given, in case of need, by qualified teachers who for some reason cannot give full-time service.
60. Teachers employed regularly on a part-time basis should :
  - (a) Receive proportionately the same remuneration and enjoy the same basic conditions of employment as teachers employed on a full-time basis ;
  - (b) Be granted rights corresponding to those of teachers employed on a full-time basis as regards holidays with pay, sick leave and maternity leave, subject to the same eligibility requirements ; and
  - (c) Be entitled to adequate and appropriate social security protection, including coverage under employers' pension schemes.



### VIII. The Rights and Responsibilities of Teachers

#### *Professional Freedom*

61. The teaching profession should enjoy academic freedom in the discharge of professional duties. Since teachers are particularly qualified to judge the teaching aids and methods most suitable for their pupils, they should be given the essential role in the choice and the adaptation of teaching material, the selection of textbooks and the application of teaching methods, within the framework of approved programmes, and with the assistance of the educational authorities.
62. Teachers and their organizations should participate in the development of new courses, textbooks and teaching aids.
63. Any systems of inspection or supervision should be designed to encourage and help teachers in the performance of their professional tasks and should be such as not to diminish the freedom, initiative and responsibility of teachers.
64.
  - (1) Where any kind of direct assessment of the teacher's work is required, such assessment should be objective and should be made known to the teacher.
  - (2) Teachers should have a right to appeal against assessments which they deem to be unjustified.
65. Teachers should be free to make use of such evaluation techniques as they may deem useful for the appraisal of pupils' progress, but should ensure that no unfairness to individual pupils results.
66. The authorities should give due weight to the recommendations of teachers regarding the suitability of individual pupils for courses and further education of different kinds.
67. Every possible effort should be made to promote close co-operation between teachers and parents in the interests of pupils, but teachers should be protected against unfair or unwarranted interference by parents in matters which are essentially the teacher's professional responsibility.
68.
  - (1) Parents having a complaint against a school or a teacher should be given the opportunity of discussing it in the first instance with the school principal and the teacher concerned. Any complaint subsequently addressed to higher authority should be put in writing and a copy should be supplied to the teacher.
  - (2) Investigations of complaints should be so conducted that the teachers are given a fair opportunity to



defend themselves and that no publicity is given to the proceedings.

69. While teachers should exercise the utmost care to avoid accidents to pupils, employers of teachers should safeguard them against the risk of having damages assessed against them in the event of injury to pupils occurring at school or in school activities away from the school premises or grounds.

### *Responsibilities of Teachers*

70. Recognizing that the status of their profession depends to a considerable extent upon teachers themselves, all teachers should seek to achieve the highest possible standards in all their professional work.
71. Professional standards relating to teachers' performance should be defined and maintained with the participation of the teachers' organizations.
72. Teachers and teachers' organizations should seek to co-operate fully with authorities in the interests of the pupils, of the education service and of society generally.
73. Codes of ethics or of conduct should be established by the teachers' organizations, since such codes greatly contribute to ensuring the prestige of the profession and the exercise of professional duties in accordance with agreed principles.
74. Teachers should be prepared to take their part in extra-curricular activities for the benefit of pupils and adults.

### *Relations between Teachers and the Education Service as a Whole*

75. In order that teachers may discharge their responsibilities, authorities should establish and regularly use recognized means of consultation with teachers' organizations on such matters as educational policy, school organization, and new developments in the education service.
76. Authorities and teachers should recognize the importance of the participation of teachers, through their organizations and in other ways, in steps designed to improve the quality of the education service, in educational research, and in the development and dissemination of new improved methods.
77. Authorities should facilitate the establishment and the work of panels designed, within a school or within a broader framework, to promote the co-operation of teachers of the same subject and should take due account of the opinions and suggestions of such panels.



78. Administrative and other staff who are responsible for aspects of the education service should seek to establish good relations with teachers and this approach should be equally reciprocated.

### *Rights of Teachers*

79. The participation of teachers on social and public life should be encouraged in the interests of the teacher's personal development, of the education service and of society as a whole.
80. Teachers should be free to exercise all civil rights generally enjoyed by citizens and should be eligible for public office.
81. Where the requirements of public office are such that the teacher has to relinquish his teaching duties, he should be retained in the profession for seniority and pension purposes and should be able to return to his previous post or to an equivalent post after his term of public office has expired.
82. Both salaries and working conditions for teachers should be determined through the process of negotiation between teachers' organizations and the employers of teachers.
83. Statutory or voluntary machinery should be established whereby the right of teachers to negotiate through their organizations with their employers, either public or private, is assured.
84. Appropriate joint machinery should be set up to deal with the settlement of disputes between the teachers and their employers arising out of terms and conditions of employment. If the means and procedures established for these purposes should be exhausted or if there should be a breakdown in negotiations between the parties, teachers' organizations should have the right to take such other steps as are normally open to other organizations in the defence of their legitimate interests.

## **IX. Conditions for Effective Teaching and Learning**

85. Since the teacher is a valuable specialist, his work should be so organized and assisted as to avoid waste of his time and energy.

### *Class Size*

86. Class size should be such as to permit the teacher to give the pupils individual attention. From time to time provision may be made for small group or even individual instruction



for such purposes as remedial work, and on occasion for large group instruction employing audio-visual aids.

### *Ancillary Staff*

87. With a view to enabling teachers to concentrate on their professional tasks, schools should be provided with ancillary staff to perform non-teaching duties.

### *Teaching Aids*

88. (1) Authorities should provide teachers and pupils with modern aids to teaching. Such aids should not be regarded as a substitute for the teacher but as a means of improving the quality of teaching and extending to a larger number of pupils the benefits of education.
- (2) Authorities should promote research into the use of such aids and encourage teachers to participate actively in such research.

### *Hours of Work*

89. The hours teachers are required to work per day and per week should be established in consultation with teachers' organizations.
90. In fixing hours of teaching account should be taken of all factors which are relevant to the teacher's work load, such as :
- (a) The number of pupils with whom the teacher is required to work per day and per week ;
  - (b) The necessity to provide time for adequate planning and preparation of lessons and for evaluation of work ;
  - (c) The number of different lessons assigned to be taught each day ;
  - (d) The demands upon the time of the teacher imposed by participation in research, in co-curricular and extra-curricular activities, in supervisory duties and in counselling of pupils ;
  - (e) The desirability of providing time in which teachers may report to and consult with parents regarding pupil progress.
91. Teachers should be provided time necessary for taking part in in-service training programmes.



92. Participation of teachers in extra-curricular activities should not constitute an excessive burden and should not interfere with the fulfilment of the main duties of the teacher.
93. Teachers assigned special educational responsibilities in addition to classroom instruction should have their normal hours of teaching reduced correspondingly.

#### *Annual Holidays with Pay*

94. All teachers should enjoy a right to adequate annual vacation with full pay.

#### *Study Leave*

95. (1) Teachers should be granted study leave on full or partial pay at intervals.
- (2) The period of study leave should be counted for seniority and pension purposes.
- (3) Teachers in areas which are remote from population centres and are recognized as such by the public authorities should be given study leave more frequently.

#### *Special Leave*

96. Leave of absence granted within the framework of bilateral and multilateral cultural exchanges should be considered as service.
97. Teachers attached to technical assistance projects should be granted leave of absence and their seniority, eligibility for promotion and pension rights in the home country should be safeguarded. In addition special arrangements should be made to cover their extraordinary expenses.
98. Foreign guest teachers should similarly be given leave of absence by their home countries and have their seniority and pension rights safeguarded.
99. (1) Teachers should be granted occasional leave of absence with full pay to enable them to participate in the activities of their organizations.
- (2) Teachers should have the right to take up office in their organizations; in such case their entitlements should be similar to those of teachers holding public office.
100. Teachers should be granted leave of absence with full pay for adequate personal reasons under arrangements specified in advance of employment.



*Sick Leave and Maternity Leave*

101. (1) Teachers should be entitled to sick leave with pay.  
(2) In determining the period during which full or partial pay shall be payable, account should be taken of cases in which it is necessary for teachers to be isolated from pupils for long periods.
102. Effect should be given to the standards laid down by the International Labour Organisation in the field of maternity protection, and in particular the Maternity Protection Convention, 1919, and the Maternity Protection Convention (Revised), 1952, as well as to the standards referred to in paragraph 126 of this Recommendation.
103. Women teachers with children should be encouraged to remain in the service by such measures as enabling them, at their request, to take additional unpaid leave of up to one year after childbirth without loss of employment, all rights resulting from employment being fully safeguarded.

*Teacher Exchange*

104. Authorities should recognize the value both to the education service and to teachers themselves of professional and cultural exchanges between countries and of travel abroad on the part of teachers; they should seek to extend such opportunities and take account of the experience acquired abroad by individual teachers.
105. Recruitment for such exchanges should be arranged without any discrimination, and the persons concerned should not be considered as representing any particular political view.
106. Teachers who travel in order to study and work abroad should be given adequate facilities to do so and proper safeguards of their posts and status.
107. Teachers should be encouraged to share teaching experience gained abroad with other members of the profession.

*School Buildings*

108. School buildings should be safe and attractive in over-all design and functional in layout; they should lend themselves to effective teaching, and to use for extra-curricular activities and, especially in rural areas, as a community centre; they should be constructed in accordance with established sanitary standards and with a view to durability, adaptability and easy, economic maintenance.



109. Authorities should ensure that school premises are properly maintained, so as not to threaten in any way the health and safety of pupils and teachers.
110. If the planning of new schools representative teacher opinion should be consulted. In providing new or additional accommodation for an existing school the staff of the school concerned should be consulted.

*Special Provisions for Teachers in Rural or Remote Areas*

111. (1) Decent housing, preferably free or at a subsidized rental, should be provided for teachers and their families in areas remote from population centres and recognized as such by the public authorities.
- (2) In countries where teachers, in addition to their normal teaching duties, are expected to promote and stimulate community activities, development plans and programmes should include provision for appropriate accommodation for teachers.
112. (1) On appointment or transfer to schools in remote areas, teachers should be paid removal and travel expenses for themselves and their families.
- (2) Teachers in such areas should, where necessary, be given special travel facilities to enable them to maintain their professional standards.
- (3) Teachers transferred to remote areas should, as an inducement, be reimbursed their travel expenses from their place of work to their home town once a year when they go on leave.
113. Whenever teachers are exposed to particular hardships, they should be compensated by the payment of special hardship allowances which should be included in earnings taken into account for pension purposes.

**X. Teachers' Salaries**

114. Amongst the various factors which affect the status of teachers, particular importance should be attached to salary, seeing that in present world conditions other factors, such as the standing or regard accorded them and the level of appreciation of the importance of their function, are largely dependent, as in other comparable professions, on the economic position in which they are placed.
115. Teachers' salaries should :
  - (a) Reflect the importance to society of the teaching function and hence the importance of teachers as well as



the responsibilities of all kinds which fall upon them from the time of their entry into the service ;

- (b) Compare favourably with salaries paid in other occupations requiring similar or equivalent qualifications ;
  - (c) Provide teachers with the means to ensure a reasonable standard of living for themselves and their families as well as to invest in further education or in the pursuit of cultural activities, thus enhancing their professional qualification ;
  - (d) Take account of the fact that certain posts require higher qualifications and experience and carry greater responsibilities.
116. Teachers should be paid on the basis of salary scales established in agreement with the teachers' organizations. In no circumstances should qualified teachers during a probationary period or if employed on a temporary basis be paid on a lower salary scale than that laid down for established teachers.
117. The salary structure should be planned so as not to give rise to injustices or anomalies tending to lead to friction between different groups of teachers.
118. Where a maximum number of class contact hours is laid down, a teacher whose regular schedule exceeds the normal maximum should receive additional remuneration on an approved scale.
119. Salary differentials should be based on objective criteria such as levels of qualification, years of experience or degrees of responsibility but the relationship between the lowest and the highest salary should be of a reasonable order.
120. In establishing the placement on a basic salary scale of a teacher of vocational or technical subjects who may have no academic degree, allowance should be made for the value of his practical training and experience.
121. Teachers' salaries should be calculated on an annual basis.
122. (1) Advancement within the grade through salary increments granted at regular, preferably annual, intervals should be provided.
- (2) The progression from the minimum to the maximum of the basic salary scale should not extend over a period longer than 10 to 15 years.
- (3) Teachers should be granted salary increments for service performed during periods of probationary or temporary appointment.



123. (1) Salary scales for teachers should be reviewed periodically to take into account such factors as a rise in the cost of living, increased productivity leading to higher standards of living in the country or a general upward movement in wage or salary levels.
- (2) Where a system of salary adjustments automatically following a cost-of-living index has been adopted, the choice of index should be determined with the participation of the teachers' organizations and any cost-of-living allowance granted should be regarded as an integral part of earnings taken into account for pension purposes.
124. No merit rating system for purposes of salary determination should be introduced or applied without prior consultation with and acceptance by the teachers' organizations concerned.

## **XI. Social Security**

### *General Provisions*

125. All teachers, regardless of the type of school in which they serve, should enjoy the same or similar social security protection. Protection should be extended to periods of probation and of training for those who are regularly employed as teachers.
126. (1) Teachers should be protected by social security measures in respect of all the contingencies included in the International Labour Organisation Social Security (Minimum Standards) Convention, 1952, namely by medical care, sickness benefit, unemployment benefit, old-age benefit, employment injury benefit, family benefit, maternity benefit, invalidity benefit and survivors' benefit.
- (2) The standards of social security provided for teachers should be at least as favourable as those set out in the relevant instruments of the International Labour Organisation and in particular the Social Security (Minimum Standards) Convention, 1952.
- (3) Social security benefits for teachers should be granted as a matter of right.
127. The social security protection of teachers should take account of their particular conditions of employment, as indicated in paragraphs 128—140.

### *Medical Care*

128. In regions where there is a scarcity of medical facilities teachers should be paid travelling expenses necessary to obtain appropriate medical care.



*Sickness Benefit*

129. (1) Sickness benefit should be granted throughout any period of incapacity for work involving suspension of earnings.
- (2) It should be paid from the first day in each case of suspension of earnings.
- (3) Where the duration of sickness benefit is limited to a specified period, provisions should be made for extensions in cases in which it is necessary for teachers to be isolated from pupils.

*Employment Injury Benefit*

130. Teachers should be protected against the consequences of injuries suffered not only during teaching at school but also when engaged in school activities away from the school premises or grounds.
131. Certain infectious diseases prevalent among children should be regarded as occupational diseases when contracted by teachers who have been exposed to them by virtue of their contact with pupils.

*Old-age Benefit*

132. Pension credits earned by a teacher under any education authority within a country should be portable should the teacher transfer to employment under any other authority within that country.
133. Taking account of national regulations, teachers who, in case of a duly recognized teacher shortage, continue in service after qualifying for a pension should either receive credit in the calculation of the pension for the additional years of service or be able to gain a supplementary pension through an appropriate agency.
134. Old-age benefit should be so related to final earnings that the teacher may continue to maintain an adequate living standard.

*Invalidity Benefit*

135. Invalidity benefit should be payable to teachers who are forced to discontinue teaching because of physical or mental disability. Provision should be made for the granting of pensions where the contingency is not covered by extended sickness benefit or other means.
136. Where disability is only partial in that the teacher is able to teach part time, partial invalidity benefit should be payable.



137. (1) Invalidity benefit should be so related to final earnings that the teacher may continue to maintain an adequate living standard.
- (2) Provision should be made for medical care and allied benefits with a view to restoring or, where this is not possible, improving the health of disabled teachers, as well as for rehabilitation services designed to prepare disabled teachers, wherever possible, for the resumption of their previous activity.

### *Survivors' Benefit*

138. The conditions of eligibility of survivors' benefit and the amount of such benefit should be such as to enable survivors to maintain an adequate standard of living and as to secure the welfare and education of surviving dependent children.

### *Means of providing Social Security for Teachers*

139. (1) The social security protection of teachers should be assured as far as possible through a general scheme applicable to employed persons in the public sector or in the private sector as appropriate.
- (2) Where no general scheme is in existence for one or more of the contingencies to be covered, special schemes, statutory or non-statutory, should be established.
- (3) Where the level of benefits under a general scheme is below that provided for in this Recommendation, it should be brought up to recommended standard by means of supplementary schemes.
140. Consideration should be given to the possibility of associating representatives of teachers' organizations with the administration of special and supplementary schemes, including the investment of their funds.

## **XII. The Teacher Shortage**

141. (1) It should be a guiding principle that any severe supply problem should be dealt with by measures which are recognized as exceptional, which do not detract from or endanger in any way professional standards already established or to be established and which minimize educational loss to pupils.
- (2) Recognizing that certain expedients designed to deal with the shortage of teachers, such as over-large classes and the unreasonable extension of hours of teaching



duty are incompatible with the aims and objectives of education and are detrimental to the pupils, the competent authorities as a matter of urgency should take steps to render these expedients unnecessary and to discontinue them.

142. In developing countries, where supply considerations may necessitate short-term intensive emergency preparation programmes for teachers, a fully professional, extensive programme should be available in order to produce corps of professionally prepared teachers competent to guide and direct the educational enterprise.
143. (1) Students admitted to training in short-term, emergency programmes should be selected in terms of the standards applying to admission to the normal professional programme, or even higher ones, to ensure that they will be capable of subsequently completing the requirements of the full programme.
- (2) Arrangements and special facilities, including extra study leave on full pay, should enable such students to complete their qualifications in service.
144. (1) As far as possible, unqualified personnel should be required to work under the close supervision and direction of professionally qualified teachers.
- (2) As a condition of continued employment such persons should be required to obtain or complete their qualifications.
145. Authorities should recognize that improvements in the social and economic status of teachers, their living and working conditions, their terms of employment and their career prospects are the best means of overcoming any existing shortage of competent and experienced teachers, and of attracting to and retaining in the teaching profession substantial numbers of fully qualified persons.

### **XIII. Final Provision**

146. Where teachers enjoy a status which is, in certain respects, more favourable than that provided for in this Recommendation, its terms should not be invoked to diminish the status already granted.

### **IMPLEMENTATION OF THE RECOMMENDATION CONCERNING THE STATUS OF TEACHERS**

The Special Intergovernmental Conference which adopted on 5 October 1966 a comprehensive international instrument concerning the status of teachers, marked the culmination of a long international



movement towards the professional and social upgrading of teachers. Since 1947, when the term "Teachers' Charter" appeared for the first time in Unesco's programme, various attempts had been made to formulate a set of principles defining, at an international level, the rights and responsibilities of teachers and relating these rights and responsibilities to the wider issues of expansion and progress of education in the world. Several international teachers' organizations drew up teachers charters which reflected the experience and aspirations of their members, totalling some 10 million. Several sessions of the International Conference on Public Education, convened jointly by Unesco and the International Bureau of Education, made detailed recommendations concerning the preservice and in-service training of teachers, their legal and material status, as well as the exercise of the teaching profession, to Ministries of Education.

The novelty of the recommendation elaborated jointly by Unesco and the International Labour Organisation, in co-operation with teaching organizations is threefold. First, it is based on all the previous work in this field, enriched and updated by regional international surveys and meetings of experts devoted to these issues, organized under the auspices of ILO and Unesco during the period 1958-1966. It is therefore more comprehensive and more systematic than any previous "charter". Secondly, the provisions of the recommendation aimed at the improvement of the academic, professional, economic and social status of teachers are conceived in terms of an overall educational planning and policy and organically related to the quantitative and qualitative progress of education. Thirdly—and most important—the recommendation was adopted by governments, which means on the one hand that, in its final version, due account was taken of the diversity of educational systems and socio-economic conditions in different parts of the world, and on the other, that the governments of Member States of Unesco and ILO are morally bound by this instrument and, by virtue of the constitutional provisions of the two organizations, responsible for its implementation.

### **Dissemination of the Principles of the Recommendation**

As soon as the final text of the recommendation was adopted, the two sponsoring agencies made a systematic effort to publicize its content. Copies of the recommendation in four working languages have been put at the disposal of governments and their appropriate public services, National Commissions, Unesco and ILO experts in the field, numerous teacher training institutions and teachers' organizations. In addition to this free distribution, organizations wishing to distribute large quantities of the recommendation have been offered the possibility of obtaining copies at a nominal price. The total number of Unesco printed copies distributed upto October 1968 has exceeded 12,000. Several teachers' organizations reprinted the recommendation in their national periodicals, some of which have impressive circulation figures: for example, "The Teacher" (U.K.), over 200,000, and "L'enseignement" (Canada), 80,000. Two



years after its adoption in four languages, the recommendation has been translated into seventeen other languages: Arabic, Chinese, Czech, Danish, Finnish, Flemish, German, Hebrew, Hungarian, Indonesian, Japanese, Korean, Portuguese, Serbo-Croatian, Swedish, Thai, Urdu. It appears that more than one translation was made into German, Flemish and Italian. In one country, the Ministry of Education addressed the full text of the recommendation to all local educational authorities.

In October 1967, a pamphlet entitled *Status of Teachers* was published jointly by ILO and Unesco. The publication describes the origin and the significance of the recommendation, and in addition to the text of the instrument, gives pertinent quotations from other international declarations and instruments applying to teachers and referred to in the recommendation [the Declaration of the Rights of the Child, Freedom of Association and Protection of the Right to Organize Conventions (ILO), Convention against Discrimination in Education (Unesco), etc.]. The pamphlet also reprints the report of the Special Intergovernmental Conference and a list of relevant recommendations adopted by the International Conference on Public Education (Unesco/IBE).

In order to explain to the general public the main issues underlying the objectives and main provisions of the recommendation, Professor Jean Thomas (France), President of the Special Intergovernmental Conference on the Status of Teachers, wrote a booklet at the request of Unesco entitled *Teachers for the Schools of Tomorrow* (see p. 26), available in French, English and Spanish.

There is no doubt that the wide dissemination of the principles of the recommendation is the first step towards achieving its objectives. At their meeting held in April 1968 at Unesco House, international teachers' organizations rightly emphasized this point of view and expressed their determination to continue the work of dissemination, in co-operation with other groups of organized public opinion, especially at provincial and local levels, so as to make the recommendation known and understood not only by individual practising and student teachers and all parents, but generally by all those concerned with progress and the quality of education.

### Studies and Enquiries

Although the principal provisions of the recommendation are based on trends observable in all regions of the world, the extent to which these trends are manifest in individual countries varies considerably according to socio-economic and cultural differences, and according to the patterns and organizations of educational systems. For this reason, the Secretariat of Unesco has initiated international surveys and comparative studies on the manner in which the common standards set out in the recommendation are understood and applied in a selected number of countries. It is hoped that the results of these studies, when published, will provide stimulation and



guidance for improving the status of teachers, and promote progressive educational policies in other countries. In 1968, an enquiry on the participation of teachers in the elaboration of educational policy and in the improvement of education, was carried out in co-operation with four international teachers' organizations (World Confederation of Organizations of the Teaching Profession, World Federation of Teachers' Unions, International Federation of Free Teachers' Unions, World Union of Catholic Teachers). The enquiry covered 33 countries: Austria, Belgium, Canada, Ceylon, Chile, Republic of the Congo, Democratic Republic of the Congo, Cuba, Denmark, France, Federal Republic of Germany, Ghana, Hungary, India, Israel, Italy, Japan, Republic of Korea, Netherlands, New Zealand, Nicaragua, Peru, Philippines, Sudan, Sweden, Tanzania, Thailand, Trinidad and Tobago, Tunisia, U.S.A., USSR, Uruguay, Yugoslavia.

In 1967-68, each of the international teachers' organizations selected one or more major chapters of the recommendation as a subject of study for their international or regional conferences. The discussions were based on reports of national associations on problems relating to the implementation of the recommendation. Thus the World Confederation of Organizations of the Teaching Profession chose as the theme of its conference in Vancouver (Canada) 1967, "Professional responsibility of teachers", and discussed the content and implications of the recommendation at regional seminars in Latin America (Bogota, 1966), Africa (Tunis, 1967) and Asia (Tokyo, 1967). "Conditions for effective teaching and learning" was the theme discussed by the International Federation of Teachers' Associations and the Federation of Secondary Teachers' Associations in Copenhagen in 1967. The conference of the Confederacion de Educadores Americanos in Mexico, 1967, was devoted to the theme "Improvement of the status of teachers in Latin America", while the World Federation of Teachers' Unions examined "The scope and limits of the recommendation concerning the status of teachers" in Leipzig in the same year. The World Union of Catholic Teachers analysed the "Main features of the recommendation" in Berlin, 1967, and the theme selected by the International Federation of Teachers' Associations for its conference in Dublin in 1968 was "Teachers' Rights". Lastly, the International Federation of Free Teachers' Unions has undertaken a systematic analysis of international conventions and recommendations adopted by ILO and applicable to teachers.

The provisions of the recommendation concerning the pre-service preparation of teachers served as a frame of reference for a committee of experts convened by Unesco in December 1967 to review trends and problems in teacher education. The committee, whose composition reflected the diversity of educational systems and the main geographical and cultural regions of the world, examined the present needs and changes in the organization and content of teacher education in both developed and developing countries.



Its conclusions, while in harmony with the general principles of the recommendation, offer more explicit guidance for future planning and action in the field of teacher preparation and, in addition, include an inventory of urgent problems which deserve further study.

The development of systematic measures for further education of teachers in service is a task upon which the recommendation places strong emphasis. The recent meeting of international teachers' organizations convened by Unesco revealed that most national professional associations consider the strengthening of measures in this field, with the active participation of the organized teaching profession, as a top priority activity for the improvement of the status of teachers. Assistance to national and regional schemes of further education of teachers has been a standing feature of Unesco's educational programmes for many years. In 1969-70, Unesco intends to carry out a world-wide survey of trends and problems in this vital field in order to facilitate an international exchange of relevant information on various national schemes.

### **Progressive Application of the Recommendation**

The Special Intergovernmental Conference which adopted the recommendation also unanimously expressed its concern that Unesco and ILO "after mutual consultation and in a spirit of close co-operation" should take measures for its implementation. In the weeks following the close of the intergovernmental conference, the Unesco General Conference at its fourteenth session and the Governing Body of ILO at its 167th session adopted an identical resolution inviting Member States to apply the provisions of the recommendation, to submit the international instrument to competent authorities before 1 December 1967, and subsequently to transmit periodic reports on measures taken by them to put the recommendation into effect. This resolution also stipulated that a small inter-organization body, half of whose members were to be chosen by Unesco and half by ILO, would be set up to examine these reports.

By October 1968 the Secretariat had received thirty initial reports from Member States indicating the name of the competent authorities to which the recommendation had been formally submitted, and the nature of the steps taken by them to give effect to the recommendation. Several of these reports contained interesting information on measures taken to improve the academic, social and economic status of teachers.

Less than two years after the adoption of the recommendation, the Joint ILO/Unesco Committee of Experts on the Application of the Recommendation held its first session in Geneva, from 16 to 20 September 1968. The 12 members of the joint committee, appointed by the Executive Board of Unesco and the Governing Body of ILO, acting in their private capacities, drew up a questionnaire designed to guide Member States in the preparation of their reports.



The questionnaire aims at obtaining information on progress in the improvement of teachers' status in various countries, changes in law and in fact which have taken place during the last five years, as well as on short-term future plans. Replies should reach Unesco and ILO by late spring 1969. The Joint ILO/Unesco Committee decided, in addition to governmental reports, to take into account information received from teachers' organizations, whether national bodies which co-operate with ILO or international organizations having consultative relations with Unesco. At its second session to be held in Paris in spring 1970, the committee will examine the reports of Member States, together with other pertinent information at its disposal and draw up its own evaluation of the progress achieved in Member States. Its report will be submitted to the General Conference of Unesco and to the Governing Body of ILO, which will decide on such separate but parallel action as they may deem appropriate.

### **Instrument of Educational Progress**

There is evidence that the impact of the recommendation is being felt in educational circles in many parts of the world. Whenever national teachers' organizations discuss their professional problems with educational authorities, they are now in a position to refer to the provisions of an official international instrument which clearly defines their rights. These provisions affirm not only the rights of teachers to negotiate with their employers the employment and working conditions commensurate with the importance of the teacher's social function, but also the right to be associated in the determination of educational policy. This right implies new responsibilities for teachers, in addition to their current classroom duties. They are expected, through their organizations or by other means, to collaborate with educational authorities in such matters as the preparation of educational reforms, the revision of curricula and the development of new educational methods. There are signs all over the world that teachers are increasingly aware of these responsibilities which require a serious effort on their part to keep abreast of new educational developments. Through its programme of international studies on the new responsibilities of teachers, its regular consultations and active co-operation with teachers' organizations, Unesco intends to stimulate this process aimed at developing a fruitful partnership between teachers and educational authorities for the improvement of education.

(By Vladimir Hercik, Unesco Chronicle, January 1969, Vol. XV No. 1.)



## In-Service Training of Primary School Teachers in Asia

### Principal Findings and Recommendations of a Regional Symposium

A Regional Symposium on the In-Service Training of Primary School Teachers in Asia was convened by the Asian Institute for Teacher Educators (sponsored by Unesco), in the University of the Philippines, Quezon City, Philippines, from 5 to 19 July 1967. This was the first meeting of its kind in the programme of the Institute. The organization of the Symposium was authorized by the 1966 General Conference of Unesco and received assistance from Unesco.

In recognition of the importance of in-service training for teachers, the Conference of Ministers of Education and Ministers responsible for Economic Planning of Member States in Asia, convened by Unesco with the co-operation of ECAFE in 1965, in Bangkok, made a special recommendation about this problem, urging that Member States "organize in-service training of teachers in order to keep the teacher abreast with modern advances in educational theory and practice and in his own subject field, and to enable those who do not possess adequate qualifications or are untrained, to acquire needed qualifications."

In pursuance of the above decision and recommendation, the Asian Institute invited experts, in their individual capacity, from the Member States in Asia as well as observers from UNICEF, WCOTP, the Asia Foundation and Unesco sponsored regional institutes. Experts from sixteen Member States submitted reports on their respective countries and fifteen participated in the Symposium.

### The Objectives of the Symposium

These were defined as follows :

- (i) To review the in-service training programmes in the countries of the region ;
- (ii) In the light of the above review, to prepare a basic statement of principles for the organization and conduct of in-service training programmes ; and



- (iii) To identify the areas where further research is needed and to develop research designs for such studies.

### THE NEED FOR IN-SERVICE TRAINING AIMS AND OBJECTIVES

In-service training of primary school teachers in Asia is vital to the progress and qualitative improvement of education in the region, particularly at the primary level, and should be considered as both complementary and supplementary to the normal pre-service programmes.

In view of the rapid expansion of education in all Member States, particularly at the primary level, many countries have had to recruit teachers with qualifications which are lower than either the minimum prescribed qualifications at the time of admission to training or the present prescribed minimum requirements. In addition, these countries have had to resort to emergency or "crash" training programmes to prepare as quickly as possible new teachers for the fast expanding school programme. As a consequence, there is a rather high proportion of unqualified or inadequately trained teachers in primary schools in many Member States, who must be given regular in-service training to ensure that the quantitative expansion in education is accompanied by qualitative improvement.

The tendency in most countries today, especially among the advanced nations, is to lengthen the period for pre-service training and to raise the present minimum qualifications with a view to improving the quality of teachers and teacher training. Most developing countries, however, cannot yet afford to think in terms of lengthening the period of pre-service training because of the urgent need of producing new teachers for immediate service in schools. In any case, pre-service training, however long, does not and cannot fully prepare a person to function efficiently as a teacher throughout his professional life. Pre-service training must be followed by career-long in-service training and education if the quality of teachers and of education in primary schools is to be maintained and improved. It is, therefore, essential that the pre-service training of student teachers should be closely integrated and coordinated with the in-service training programme for trained teachers in order to provide a programme of continuous teacher education and to foster their professional growth.

There is a great deal of wastage in primary schools in some countries resulting from uninteresting and ineffective teaching by the large number of underqualified or inadequately trained teachers particularly from the emergency training courses. A programme of teacher education for these inadequately trained teachers will help to reduce the high percentage of dropouts from primary schools and ensure equality of opportunity for children in primary schools and better returns on educational investment.



In the rural areas, the teacher is likely to suffer from intellectual and professional isolation and from low morale. In view of the fact that in some countries teachers have to serve not only as teachers in the classroom but also as leaders and guides in the social, cultural and economic life of the community, it is essential that these teachers be given in-service training to refresh their minds and keep abreast of cultural and educational developments.

There has been a great deal of research and experimentation in the behavioural sciences in respect of the social, psychological and emotional development and growth of children and the learning process, which have revolutionized educational theory and practice and have contributed to the establishment of a sound, scientific basis for education. In addition, rapid changes are taking place in science and technology, resulting in an ever increasing use of new instructional materials and equipment including audio-visual aids and mass media. All these developments have led educators to review and revise curricula on the basis of the new concepts of education. It is vital for teachers in primary schools to understand these developments and their far-reaching implications for teaching, administration and supervision in the total educational system and be prepared adequately for giving effect to curricular changes.

In-service training should also be designed to help teachers to become well-adjusted members of a society in the process of change. For this, they have to keep themselves constantly abreast of the rapid changes that take place in society and in the world around them. Negative attitudes to change have to be broken down and them. Positive attitudes built to broaden their cultural backgrounds, cultivate their personalities and improve their professional techniques. Since the content of education draws its vitality from the personality of the teacher, it is essential that teachers be given in-service training to enable them to find the resources to grow from within by refreshing their minds, strengthening their convictions, awakening their interests and curiosity and instilling professional pride and respect for high standards of performance.

In-service training provides an excellent opportunity to Ministries of Education to offer further and specialized training to promising teachers for promotion to positions of greater responsibility in education. The concepts of administration and supervision have changed materially during the last few decades and in-service programmes have become necessary to bring practice up to date. The new concept changes the role of the administrator from the autocratic to the democratic approach. Likewise, the supervisor in the new situation becomes a valuable resource to teachers who collaborate in the planning of curricula and the improvement of instruction.

In-service training promotes professional growth and thus enhances self-confidence and security of tenure. The promise of a



career resting on the firm foundation of social and economic security is a very important aspect of in-service training.

## PLANNING AND ADMINISTRATION OF IN-SERVICE TRAINING

### Planning

In many of the Asian countries to-day, the national plan for education does not make a distinguishable provision for in-service training, thus making it difficult to obtain adequate financial support for such training. It is necessary that the needs for in-service training should be carefully assessed in every country and a definite plan to meet these needs formulated, which would form part of the plan for education within the overall national plan of economic and social development.

Planning an in-service training programme has certain special features which call for a considerable measure of flexibility. In planning for the development of schools and colleges, the number of students to be catered for and the qualifications to which the curricula lead can be clearly and simply stated. In the case of in-service training, numbers will fluctuate according to the length of courses, that is, the shorter the courses the greater the number of teachers who can be accommodated in any one year. Again, the objectives of the courses must be allowed to vary according to current needs. Nevertheless, in spite of these difficulties, a plan for in-service training expressed in terms of the numbers and costs involved and the objectives is necessary if it is to be accepted as a normal and permanent part of an educational plan. Within this general framework, details of specific courses should be left to local decision.

An important aspect of planning as it relates to the in-service training of teachers is to provide for ample and adequate consultation not only among teacher educators, supervisors, administrators and others involved in the organization of training programmes but also with teachers for whom these programmes are intended.

### Administrative Machinery

Even a carefully conceived plan for in-service training with an adequate financial provision may prove ineffective if there is no proper machinery for its implementation. It is, therefore, desirable that there should be a special administrative machinery at all levels of administration to take care of in-service training.

At the national level, this could take the form of a department (or division or unit) of teacher education which takes care of both pre-service and in-service training. It is important, however, that this unit functions as a part and parcel of the total administration of the Ministry or Department of Education. Corresponding units should also be set up at the regional and local levels.



For an effective functioning of this machinery, it is imperative that it be headed by an officer of sufficient seniority and status and be staffed at all levels by properly qualified and competent personnel. If such personnel is not readily available, it will be necessary either to provide the facilities needed for their appropriate training or to utilise similar facilities available elsewhere either in the region or outside it.

The machinery set up by the government for the administration of in-service training should include arrangements for utilising the services of other agencies or organizations that can contribute effectively to this programme, such as universities, professional associations of teachers, other government departments, local authorities, cultural and civic groups, local communities and international organizations.

Effective co-operation and co-ordination among these agencies is of prime importance. A suitable way of ensuring co-ordination is to establish a co-ordinating body composed of the representative of all the agencies concerned at the different levels.

Co-operation should be particularly strong between teacher educators and supervisors in view of the fact that these two groups share the main task of organizing and carrying out the in-service training programmes. The administrative personnel occupy a pivotal position in the total scheme of co-operation and co-ordination since it is they who not only determine the general policies on which the in-service training programmes will be based and provide the necessary financial and material support but also license teachers and enforce service regulations.

There should be a gradual movement in the direction of a decentralized system of organization and administration for in-service training. While overall planning and determination of policy are inseparable from the functions of the Central authority, it is highly desirable that agencies of in-service training at the regional and local levels should be encouraged to assume increasing responsibility for the organization and implementation of in-service training programmes. One of the main advantages of decentralization lies in the fact that local educators, provided they are qualified, are in the best position to know the local conditions in which in-service training operates as well as the needs of children and the problems of teachers in their areas.

Supervisors have a very important role to play in the in-service training of teachers. In the past they have been concerned more with the inspection of school facilities and with the assessment of teachers' competencies than with assisting teachers in their professional growth. In future, every encouragement and help should be given to them to enable them to assume a leadership role, in collaboration with other educators, in the development of effective programmes of in-service training.



In their own particular role as supervisors, they can also help teachers to grow professionally by making use of such diverse means as providing individual guidance, holding group conferences, giving demonstrations of teaching, distributing professional literature, and organizing study groups of teachers.

There are at least two restrictive factors that prevent many supervisors in the Asian countries from making an effective contribution to the in-service growth of teachers. These are : (i) the unduly large number of schools and teachers that they are required to supervise, and (ii) the enormous amount of clerical work that they have to do for lack of adequate clerical assistance. If these two inhibiting conditions are improved, supervisors could be expected to play a more useful role in the in-service training of teachers provided, of course, they are properly qualified and competent to take on this special assignment.

### **Finance**

Investment in an in-service training programme aims primarily, through upgrading of factor skills, at increasing the returns on existing investments by reducing dropouts and improving output. As such, it contributes directly to social and economic development and should be conceived as an essential component in resources allocation policies.

To enable programmes to be efficiently planned ahead, budgetary provision over a period of years is necessary and efficient evaluation procedures must be devised to ensure economical functioning.

Supplementary funds may be available from other sources such as foreign and international organizations, and national non-governmental agencies such as banks, local foundations, business groups, teachers' organizations, civic and cultural groups, parent-teacher organizations, and local communities; but these will be insufficient for a systematic and full programme without the main support from public funds.

### **Evaluation**

Evaluation of in-service training programmes is needed both to measure the economic returns on the investment and, to assess, in educational terms, their impact on schools and teachers.

Such evaluation may take the following forms :

- (i) Evaluation of a particular in-service training activity in the total programme in terms of the extent of involvement of the participants in the activity, the quality of thinking that took place, and the usefulness of the activity to the participants.
- (ii) Assessment of the impact made on the schools by a particular activity in the programme, which may be done



through such means as follow-up visits by staff, a study of reports made by participants, and the reactions of principals and supervisors.

- (iii) Periodical evaluation of the total programme for the benefit—firstly, of the organizers, who could then effect improvements in it, and secondly, of the government, who could decide to expand, curtail or modify it.

## THE ROLE OF VARIOUS AGENCIES

### Primary Teacher Training Institutions

In most of the Asian countries, the primary teacher training institutions have been concerned mainly, if not exclusively, with providing pre-service training. In future, they should be expected to be equally concerned with providing in-service training. In order, however, to facilitate their participation in this aspect of teacher training, there should be appropriate adjustments in their organization and staffing, including the addition of necessary personnel and facilities not only for the actual in-service training but also for follow-up.

Among the functions that such institutions may be expected to undertake, the most important are :

- (i) Participating in the development of a comprehensive programme of in-service training at all levels ;
- (ii) Providing courses for both trained and untrained teachers ;
- (iii) Organizing seminars and workshops to deal with specific problems faced by teachers ;
- (iv) Helping teachers to adapt the curriculum to local requirements ; and
- (v) Undertaking the evaluation and follow-up of the training that has been given.

### Special Centres or Institutes

In some countries, special centres or institutes have been set up for the express purpose of providing in-service training to primary school teachers, thus complementing the efforts of the regular primary teacher training institutions and other agencies engaged in this work. Such centres, wherever they exist, could also undertake to organize correspondence courses, long-term courses for untrained teachers and refresher courses for trained teachers. However, in view of the sound principle that pre-service training should not be divorced from in-service training, it might not be desirable to delegate the responsibility for refresher courses entirely, or even largely, to such special centres or institutes.

There are other useful functions that such special institutes could perform :



- (i) Provide in-service training for teacher educators, supervisors and administrators who are concerned with the training of primary school teachers ;
- (ii) Take part in or undertake research and experimentation in primary education and primary teacher training ; and
- (iii) Produce and distribute educational literature such as educational abstracts, teachers' guides, etc.

There are also some institutes in this region which are primarily engaged in educational research but which also conduct in-service training. This is a useful service which all educational research institutions should be encouraged to render.

### Universities

In very few countries in Asia are the universities directly involved in the pre-service training of primary school teachers, and it will, perhaps, be a long time before they assume this responsibility. They can nevertheless play an important role in the in-service training of primary school teachers, provided the personnel involved are given the necessary facilities. In particular, they should have opportunities for familiarising themselves with primary schools.

Some of the ways in which they can participate in such training are :

- (i) Assisting in the planning of in-service training programmes ;
- (ii) Organizing training courses, or providing resource persons for courses in such areas as the primary school subjects, or the social sciences which have a bearing on education, such as philosophy, psychology and sociology, or such specialised fields as art, music or agriculture, if and where these subjects are taught in the university ;
- (iii) Providing special courses for teacher educators, educational administrators and supervisors ; and
- (iv) Assisting in evaluation and research relating to in-service training.

### Other Governmental Departments and Agencies

Other governmental departments such as the Ministries or Departments of Health, Agriculture, and Community Development and governmental agencies such as museums, public libraries and government broadcasting systems can assist the Ministry or Department of Education in implementing in-service training programmes by providing the needed resource persons, useful data and information, pertinent publications and literature, and other facilities needed for in-service training programmes.



## **Teachers' Organizations**

Teachers' organizations can make a useful contribution to the in-service training of teachers in a number of ways. They can assist in the formulation of plans and programmes ; stimulate teachers to attend in-service training activities through such means as educational broadcasts and financial assistance to teachers for attending such activities ; publish professional literature for use in in-service training activities ; organize professional meetings to discuss new trends and development in education ; and finally, lend support to training programmes organized by other agencies.

Associations of teacher educators, where they exist, should also engage themselves actively in the in-service training of teachers. In countries where such associations have not yet been formed, it is desirable that teacher educators should take the initiative in organizing them. At a later stage, a federation of all such associations in the Asian region could be formed to promote an exchange of views and experiences among teacher educators in the region and to develop programmes of mutual professional assistance.

## **Other Non-Governmental Agencies**

Depending upon their interests and resources, other national non-governmental agencies can render the same kind of support to programmes of in-service training as teachers' organizations can.

Foreign and international agencies can assist in this direction by co-sponsoring with national governmental agencies special programmes of in-service training. Such joint sponsorship can take the form of (i) joint effort in planning, financing and implementation of programmes ; (ii) technical and/or material assistance ; (iii) scholarships for the training of personnel, especially for teacher educators, administrators and supervisors ; and (iv) exchange of personnel and inter-country visits of educators.

## **Regional Cooperation**

It is highly desirable that regional and bilateral co-operation should be developed among the Asian Member States for the purpose of implementing programmes for the in-service training of primary school teachers. Such co-operation may take the form of exchange of personnel—students, educators, specialists, etc. ; co-operative research ; exchange of professional literature ; and inter-country visits.

In developing co-operative activities among the countries of the region, the facilities provided by several regional institutes, such as the Asian Institute for Teacher Educators and the Asian Institute of Educational Planning and Administration, should be availed of. There are also other regional programmes such as those relating to educational research, science teaching, reading materials and school



buildings which could assist in promoting the in-service training of primary school teachers in the region.

### PROGRAMMES FOR IN-SERVICE TRAINING

This section reviews first the in-service programmes for untrained and trained teachers and then certain requirements common to all programmes ; finally, it deals with the special needs of rural and remote areas. The problems that in-service training is attempting to solve are common to both men and women teachers.

#### The Untrained Teacher

The number of untrained teachers in over half of the Member States is staggering. The problem is often a double problem of how to give these untrained teachers enough general education for their task as well as how to train them in the necessary professional skills. The matter is of such urgency that exceptional measures need to be taken and comprehensive plans to cover a period of years (including continuing budgetary commitment) are essential.

To reduce the size of the problem two suggestions are made :

- (a) That untrained teachers of long teaching experience should not be required to take a full course of training but should be given teacher status after an appropriate short course ;
- (b) That so far as general education is concerned, teachers who are much below the required standard should not be required to follow the same course of study as that for secondary school children but should take a special course more suited to their needs and shorter in length.

To reduce the time needed to catch up with this backlog of untrained teachers, part of the training should be given through media which large numbers can use simultaneously, such as correspondence courses, programmed instruction, teachers' guides, radio and possibly television. Provided the numbers involved are large (which in most countries they are), the costs per untrained teacher are definitely lower than those incurred by using only traditional methods.

Some use of traditional methods is nevertheless essential. The media to which reference has just been made are sometimes called 'indirect' media because teacher and pupil cannot directly discuss problems. For this reason any programme of in-service training for the untrained teacher which uses these media must be accompanied by more traditional means, such as vacation courses, weekly seminars, and visits by training staff to observe the teacher in school. In particular, four ingredients should find a place in every complete programme :

- (a) Group discussions of problems,
- (b) Individual counselling,



(c) Supervised classroom teaching, and

(d) Library facilities.

To encourage the teacher the whole course should be broken down into units, each of which earns credit.

On the subject of indirect media, the possibilities in the use of correspondence courses with or without programmed instruction are distinctly encouraging and should be considered. Specialist staff would be required as in the case of all the other indirect media. The Asian Institute for Teacher Educators might be prepared to assist by a preliminary survey of the experiences so far acquired of correspondence courses and techniques, and making this information available to Member States in the region.

In concluding this section on the untrained teacher, it is necessary to emphasise speed not only because the problem hangs like a millstone round the neck of educational progress but also because the lack of professional status amongst a large number of teachers is bad for the morale of the teaching service and the welfare of the schools. Most untrained teachers should be able to qualify within three or four years.

### **The Trained Teacher**

It is evident that in a number of Member States the in-service training of trained primary teachers takes a very low priority. Many reasons could be produced in support of a much higher priority, but perhaps these can best be summarised by two statements:

(a) It is difficult to introduce improvements and changes throughout the primary schools by any other means as speedily as by in-service training, and for many changes there are no other means.

(b) Even in conditions where improvements must be postponed for a time, in-service training can help to prevent a lowering of standards and a loss of morale.

It may be useful to distinguish certain broad categories of in-service programmes according to the type of teacher catered for and the objectives of the course. First, there are *courses for the sub-standard trained teacher*. As standards rise many teachers find themselves below the latest requirements for a qualified teacher either on the general education side or professional side. These courses are designed specifically to upgrade them and their value is clear.

Then, there are *courses for the fully qualified teacher*. These can have a large variety of objectives and perhaps, because of this, they often suffer from two weaknesses: (a) a lack of continuity and sequence, and so their effect is weakened and dispersed; and (b) a failure to recognise that when the objective of the course is to introduce something radically new in the schools, the cooperation of heads and



supervisors must first be sought and follow-up arrangements must be intensified. The remedy lies in sequence planning of courses where necessary (this is not desirable in all cases), proper attention to preparing opinion for the acceptance of change, and follow-up visits to schools to encourage and advise the teachers who have taken courses.

The detailed content of the courses for fully qualified teachers must depend on local circumstances, but three considerations should be borne in mind when devising the programmes :

- (a) If the felt needs of teachers are given prominence, those attending the courses are more likely to become genuinely interested and actively involved.
- (b) If in-service programmes can be seen to be contributing to the solution of widely recognised problems—such as wastage from the primary school or weaknesses in the basic subjects—they will gain more support from the authorities.
- (c) If due attention is paid in the courses to the teacher's social needs, his effectiveness as a person will be increased and his morale raised.

The length of courses and the methods used can cover a wide variety. The only point to be made here is concerning method. There should be an increasing use of methods which require active participation by the teacher—such as discussion groups, seminars, workshops and action research. In contrast, lectures should only be used when there is no other way. These “participating” methods are more suitable for experienced adults, especially when dealing with the practical problems of education.

### **Requirements Common to all Programmes**

These requirements include the provision of incentives to teachers to attend courses, the involvement of teacher's interests in the programmes, the support of school principals, supervisors, and pre-service training staff, the follow-up of teachers who have been on courses, and provision for training of teacher educators engaged in in-service training.

Incentives may be used to persuade teachers to take part in in-service training programmes and can be positive or negative. They can be positive by offering rewards, such as credit points towards promotion and/or increases in salary, travel allowances, “release time”, etc., or they can be negative by providing penalties for non-attendance, such as “efficiency bars” and limited certification. Or attendance may be made compulsory and become part of the accepted life of a teacher.

Though incentives are valuable, and in most circumstances necessary, they are not by themselves sufficient. A teacher's attendance can be ensured, but more than lip service is not certain unless he becomes genuinely convinced that what he is learning will benefit



his pupils and his school. It above refers to the desirability of giving prominence during courses to those needs which are felt by teachers to be important. The point to be made here is that for teachers to feel that they are being consulted and involved in the courses, it is not enough for supervisors, who are in a position of authority, to report their views. Those who are engaged in planning and running the courses must also have the opportunity of informal consultations with teachers. Involvement is largely an emotional problem and therefore the promotion of a climate of harmony, goodwill and close personal relations must always be a main consideration both in the preparation for, and the day-to-day conduct of, in-service courses.

Where radical changes, such as a new approach to the teaching of arithmetic, are to be introduced into the schools through in-service courses, it is more than ever necessary to secure the understanding and sympathy of supervisors, heads of schools and pre-service teacher educators before any in-service courses are held. Otherwise, opposition arising out of lack of understanding may easily nullify the influences of the teacher who has attended a course. Short conferences, demonstrations and personal explanations can be used to secure this cooperation.

Courses introducing radical changes also need more follow-up support than do courses which improve on already accepted practices. It is very desirable that follow-up visits to schools should be made by the staff who were involved in the in-service course and every effort should be made to release them to undertake at least part of the follow-up programme.

On the subject of quality of in-service courses, there have been complaints of a shortage of suitable staff in some countries. So it may be helpful to suggest what are the minimum qualifications needed by in-service staff. These are three :

- (a) Practical experience of some continuous teaching at the primary level, without which it is not easy to win the real respect of experienced teachers. That the experience should be continuous is important because teaching isolated lessons does not allow one to acquire practical experience of child development at this level.
- (b) A knowledge of, and some skill in, the methods of teaching experienced adults (as is distinct from pre-service training college students). These methods are referred to above.
- (c) Specialised knowledge in his subject fields, usually of a higher level than that required for pre-service training.

Training schemes to meet these special requirements of in-service teacher educators could most economically be arranged in



conjunction with any national schemes for training pre-service teacher educators (who in many cases will be the same people). Such training could be given in special institutions or in universities but perhaps the most suitable setting would be in primary teacher training institutions already engaged in some in-service training.

### **The Special Problems of Rural and Remote Areas**

Rural primary schools constitute the vast majority of primary schools in this region and the rural primary teacher carries the extra responsibility of contributing to rural leadership. In-service courses could play an important part in keeping the rural primary teacher informed of economic and social development policies and the part he could play in them as well as in maintaining the isolated teacher's interest and enthusiasm.

### **RESEARCH FOR IN-SERVICE TRAINING**

The emergence of most Asian countries into independent status during the last two decades has brought about unprecedented social and economic changes all of which, in various ways and degrees, require corresponding changes in education. Educational leaders are becoming increasingly aware of the need for educational reforms. Since action must keep pace with rapid changes, and resources in experts and money are limited, educational research must perforce be largely functional and action-oriented. Moreover, research in in-service training will have to take related problems into account. Although basic or fundamental research is not precluded, it is strongly felt that in the present stage of educational development in Asian countries, primary emphasis should be on practical problems and needs. These practical problems about which great concern was expressed and which require urgent investigation relate to the following four major areas :

- (i) Primarily administrative and supervisory in nature ;
- (ii) Primarily concerned with curriculum and methods ;
- (iii) Primarily dealing with school personnel ; and
- (iv) Primarily related to the social context matters.

In developing a programme of research, priority should be given to surveys and reviews, action research, comparative and evaluative studies, opinion and attitude surveys, pilot studies and experimentation, and analytical and descriptive studies. The approach and method to be used in the research will be determined by the specific nature of the problem.

The following criteria might be found helpful in determining priorities in educational research :



- (i) Educational research must have a direct bearing on contemporary educational problems.
- (ii) Research should develop and utilize common standards of comparison.
- (iii) The terms used must be precisely defined.
- (iv) Research should be useful and functional.
- (v) Research should lead to action for improvement.
- (vi) Research should relate to local situations and conditions.
- (vii) Research should be designed to have value and importance for the needs of the country.

In the present stage of development of educational research in Asian countries, it will be particularly useful to undertake cooperative research, within each country as well as regionally, because it develops coordinated effort among participating entities, helps by mutual exchange of information, avoids unnecessary duplication and makes it possible to share the limited resources of expertise. The areas of the teacher training curriculum, student teaching, and evaluation of training are especially suitable for co-operative research.

For the systematic organization and encouragement of research in elementary education and teacher education in the Member States an appropriate central organization or unit in each country is desirable. Wherever such a central organization does not exist, it should be established to discharge the following functions :

- (i) Development of cooperative research ;
- (ii) Coordination of research carried out at various levels in the country ;
- (iii) Promotion of training of research workers ;
- (iv) Dissemination of available information ;
- (v) Organization of training programmes for encouraging teachers to design simple studies and conduct practical research in classroom problems ; and
- (vi) Involvement of post-graduate university students in educational research related to urgent practical problems.

If some such central body is organized to fulfil the above functions, it would serve as a professional arm of the Ministry of Education for collaboration with national and international organizations for educational research.

It is vitally important that teachers themselves should be helped to analyze the problems felt by them in a reasonably objective



and informed manner. They should be given the necessary training through in-service programmes to collect relevant facts and evidence, assess them and arrive at working decisions with a view to carrying them out. Such "action studies" are considered more valuable and meaningful to the teacher than sophisticated fundamental or theoretical research because they help teachers to identify problems and to weigh the pros and cons of evidence in arriving at decisions and carrying them out.

Almost all the country reports presented to the Symposium draw attention to the lack of professional literature available to the teacher and the paucity of library facilities. In any programme of book development, the need for educational literature should be given high priority. International assistance could be particularly useful in promoting the production of modern educational literature for teachers. In addition, educational research organizations and teacher training institutions in Member States should undertake the preparation and production of instructional materials for the use of teachers, this activity being considered as an essential part of their "extension" function.

The Asian Institute for Teacher Educators should play an important role in the promotion and development of research in this region, and therefore it should be suitably strengthened. Its programme should include :

- (i) The publication of abstracts of research done in the Member States ;
- (ii) Regular dissemination of research findings for the use of teachers ;
- (iii) Training in research methodology of selected research fellows ;
- (iv) Planning and execution of cooperative research projects.

It is noted with satisfaction that a small provision has been made in the Institute budget for developing cooperative research. It is recommended that the programme in this regard should be expanded urgently and additional resources provided to the Institute which may be used to finance research projects in teacher education in the Member States on a matching basis.

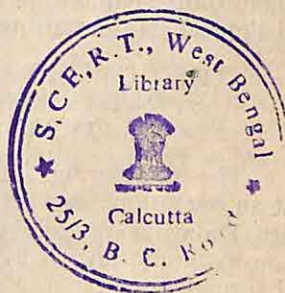
In the Institute's programme of cooperative research, high priority should be given by it to conducting a comprehensive survey of teacher training in the Asian region, at all levels (primary as well as secondary) and forms (general, vocational, special etc.). A status study of this kind is essential if further research is to be directed to assessing the assumptions on which present practices and methods are based.



One important direction for the development of Asian Institute for Teacher Educators would be to provide for teacher educators from Asian Member States to come to the Institute for a specific period to participate in its training and research programmes.

Unesco may appoint a panel of consultants from among the Asian Member States to advise the Institute on its programme of research and to act as a liaison with research organizations and institutions in the region.

Unesco may be requested to establish research fellowships in each Asian Member State to carry out specific research projects within the framework of the cooperative research projects. The selected research fellows should be provided opportunities to meet periodically at the Institute.





## Recommendations of the Meeting of Experts on Educational Planning in Asia (1966)

A meeting of Experts on Educational Planning in Asia was organized in Simla (India) from May 16 to May 28, 1966, by the Asian Institute of Educational Planning and Administration, New Delhi, under the auspices of UNESCO. The meeting was attended by 21 participants including delegates from 10 countries (Philippines, Afghanistan, Thailand, Ceylon, Malaysia, Iraq, Japan, Iran, India and France). Important recommendations were as under :

### THE CONCEPT OF EDUCATIONAL PLANNING WITH PARTICULAR REFERENCE TO TRAINING AND RESEARCH

The meeting felt that educational planning was not a science but an operation, drawing upon various disciplines (Statistics, Economics, Pedagogy, Sociology, etc.). Planning was therefore essentially team-work and involved collaboration at various stages between several specialists of the administrative and educational services.

#### **Task of Educational Planners**

According to the committee, in general terms, persons engaged in educational planning may be said to constitute all those in any nation or in international organizations, who carry significant responsibility for the formulation, implementation and revision of educational policy of a forward looking character.

Their tasks include :

- (a) *Diagnosis and appraisal* of the existing educational system in relation to the population of school-going age, its performance and its relation to the economic and social situation. (Planning of adult education is normally administratively separate but should be linked to the planning of formal education.)
- (b) *Setting special basic objectives, priorities and directions for change* in the broad magnitude of resource-allocation to



education over the long term. This would involve the establishment of relevant quantitative projections in the light of economic, demographic and social factors and also the reform of contents, methods and structure of education.

- (c) *Practical elaboration and programming* in conjunction with other national plans and in terms of specific educational goals, i.e., pupils by sex, by level and by type of education, training and recruitment of teachers, location and construction of school buildings, production of books and equipment, programming of external assistance requirements, costing and financing of programmes.
- (d) *Implementation of plans* and initiating appropriate action for the same (e.g., budget, contracts, school-mapping, educational and vocational guidance, etc.).
- (e) *Evaluation and revision of plans* in the light of implementation and taking into account new educational, political, technological, economic and demographic developments.
- (f) *Administrative reforms* and inter-ministerial co-operation at the central and local levels.
- (g) *Maintenance of the necessary contacts with national research groups* of educators, economists, demographers and sociologists, with a view to ensure the effective use of resources in education through research findings.

In brief, within the overall national planning body, the Ministry of Education and other public and private agencies, there should be people who understand how to look at the educational system in relation to the contribution which, at various levels and according to different types, it can make to economic and social development, and how in practical terms resources should be organized, quantitatively and qualitatively, to contribute to this end.

### Categories of Personnel Needed

The meeting identified the following categories and personnel needed :

- (i) Junior officers of central and local educational planning units, without specialization ;
- (ii) Senior educational planners responsible for the over-all coordination of the educational plan ;
- (iii) Specialists of various disciplines, such as economics, statistics, demography, manpower, etc. ;
- (iv) Highest level officials responsible for policy-making at the ministerial or under-secretary level ;



- (v) Administrators of the Ministry of Education at the central and local levels ;
- (vi) Officials outside the Ministry of Education concerned with educational planning.

Concerning the above classification, a number of comments were made. First, a distinction between training and information was emphasized : for some categories of personnel a full-time training was needed, whereas for other categories, orientation programmes and dissemination of information were considered to be sufficient. It was also suggested that the specialists included under category (iii) would not be necessarily located in the planning unit of the Ministry of Education, and that the contribution of specialists from other departments could be suitably drawn upon.

### **Organization of Training Courses**

The general problems of organizing a course on educational planning was summarized as follows :

- (a) A successful course requires : a competent staff, an able and appropriately qualified body of students and good curriculum material ;
- (b) A satisfactory balance between (i) lectures, (ii) informal discussions and seminars, (iii) practical work and case-studies, and (iv) individual reading.

The meeting recommended the desirability of organizing training courses around the process of educational planning. In this respect, the meeting suggested that statistics should be directly related to the different problems and not taught as a separate academic subject.

The participants felt that before making recommendations on training at the national, regional and international levels, there should be an evaluation of the efficiency of existing training facilities.

### **Training at the National Level**

The meeting felt that undoubtedly, training in educational planning will ultimately be given in national institutions, such as teacher-training colleges or universities.

The meeting felt that when national courses are organized, an attempt should be made to harmonize their contents, so that they provide a common background for the participants who proceed to join international training courses. The Regional Institute might assist in the preparation of curricula for such courses.

### **Aid offered at the International Level**

The meeting suggested that until a network of national training institutions was established, the Member-States of the Region would have to continue utilizing the facilities offered by UNESCO.



The participants examined the possibilities offered by long-term U.N.D.P. fellowships. It was felt that in selecting prospective fellowship-holders, the variations between different levels of training should be borne in mind, and continuity of training should be evolved in the field of educational planning.

Such continued training should normally start with elementary national or regional course, and then proceed to longer and more comprehensive training either at the regional institutes or in a national university, ultimately ending at the International Institute for Educational Planning.

In between such periods of training, the meeting felt that the selected official would naturally work for a sufficiently long time in his own administration. The pattern will, however, have to be applied with flexibility, taking into account the particular circumstances of each country.

The members were of the opinion that it would help the regional and international institutions concerned if a plan could be drawn in each country indicating its future need of planners and administrators at various levels.

### TRAINING PROGRAMMES

#### **A. Composition and Basic Tasks of an Educational Planning Office**

In most countries of the region where educational planning offices exist, the staffing pattern is as follows :

- (a) A number of junior officers engaged in detailed operations of educational planning ;
- (b) A departmental head assisted by one or more senior officers ;
- (c) A number of specialists in the field of statistics, school building, budgeting, etc.

The meeting suggested that following basic operations are required in the analysis of the actual educational situation in formulating the educational plans and in the process of evaluating them : collection of statistics, tabulation and elementary analysis, projections ; costing ; assessment of the efficiency of the school system and school mapping.

#### **B. Course for Junior Planning Officers**

The meeting considered the syllabus for a training course for junior planning officers in the Ministry of Education and for provincial educational officers dealing with educational planning. The objective of this course was to acquaint them with the necessary



practical techniques so that they could carry out their jobs efficiently.

In performing the basic tasks described above, the junior planning officer will also have to

- (a) Analyse a provincial educational report, summarize reports, write official letters, etc. ;
- (b) Maintain liaison with other ministries (defence, culture, health, labour, etc.) as well as the press ;
- (c) Possess a knowledge of foreign assistance programmes of the relevant agencies and their operations.

In the light of these observations, the following major headings were suggested for the syllabus :

- (i) General issues in educational planning ;
- (ii) Basic training in statistics, school mapping and demography ;
- (iii) Costing, financing and budgeting ;
- (iv) Evaluation ;
- (v) Office practices, reporting and data compilation ;
- (vi) Practical planning exercises.

It was strongly recommended that instruction should not be carried out mainly along the various disciplines which go to make up the course, but that it should have a strong emphasis on operational practices. Practical exercises, for example, in the form of preparing a provincial plan in alternative contexts, should get a high priority in the training course. In short, the training should be plan-oriented.

It was suggested that the course should cover a minimum of 160 and a maximum of 230 class hours, the suggested division of time over the various subjects being as follows :

|                                        |   |     |
|----------------------------------------|---|-----|
| Practical exercise                     | — | 25% |
| General issues in educational planning | — | 20% |
| Statistics                             | — | 20% |
| Costing and financing                  | — | 20% |
| Evaluation                             | — | 10% |
| Office practices                       | — | 5%  |

These percentages as well as the duration of the course could be adjusted in the light of the outcome of the first experimental programmes.



### **C. Comprehensive Long-term Course**

The meeting considered the syllabus for a comprehensive long-term course for the preparation of senior officers in the field of educational planning.

It was recognised that for a course of this nature the "problem-oriented" approach was the most appropriate method of instruction.

As the participants would normally have widely varying backgrounds and capacities, it was felt that in the initial stage of the course their specific remedial needs should be met.

The core of the programme could be organized around six key areas :

- (i) Analysis and diagnosis of the existing situation ;
- (ii) Preparation of long-term prospectives ;
- (iii) Detailed consideration of short-term plans ;
- (iv) Evaluation and revision of plans and programmes ;
- (v) Action-oriented research.

The course should comprise a variety of selected practical exercises and case-studies which would be continuously and appropriately interwoven with the programme of studies. The intention is not merely to enable the participants to deal with the total process of educational planning but also to give them improved understanding of the operational techniques. This would enable them to face in realistic and flexible ways the situations as they present themselves.

### **D. Orientation Seminars for Specialists**

The meeting agreed that specialists, whether in or outside the Ministry of Education, should have some basic knowledge of educational planning so that they may adapt their specialized competence to the inter-disciplinary operation of planning in education.

Two kinds of specialists were considered :

- (i) Specialists in one phase or level of education. It was felt that basic orientation in educational planning could be given to these specialists through meetings of experts in specific types of education.
- (ii) Specialists who are more or less directly involved in educational planning, such as :
  - (a) Economists (including cost accountants, development economists, etc.),
  - (b) Social scientists,



- (c) Statisticians,
- (d) Demographers,
- (e) Curriculum designers,
- (f) School building specialists, and
- (g) Educational and vocational guidance counsellors.

The main elements in the orientation seminars for these specialists would be—

- (i) General considerations on educational planning and administration ;
- (ii) General considerations on socio-economic development ;
- (iii) Application of specialised knowledge and techniques in educational planning and development.

It was suggested that orientation seminars should be held for a period of 10 to 15 days and, if possible, simultaneously for the various types of specialists. However, they could also be held separately according to the needs of the situation.

### **E. Information Programmes**

The meeting also discussed various means of providing information on educational planning to a variety of persons who were concerned with it. It was suggested that, apart from the categories considered below, it was necessary to involve a wide variety of people in the planning process by information through appropriate documentation and the extensive use of mass media.

Four major categories and the ways of providing information to them were examined.

- (i) The first, and also the most important, category is of the highest level officials, either in the Ministry of Education or in other ministries (*e.g.* planning) and also key personalities concerned with education. Those responsible for policy-making at the ministry level, get opportunities for information on educational planning through conferences organized by Unesco. For other high officials, meetings may be convened by the Regional Institutes if only one region is concerned, and by the I.I.E.P. if officials from various regions are invited for examining problems of a common nature. The main purpose of such meetings would be to assist the participants in developing and improving the quality and effectiveness of policy-making and administration through educational planning. In view of the limited time available, no attempt would be made to deal with the whole problem during one single meeting.



The topics for discussion would neither be too general nor too academic but rather oriented towards concrete problems. The discussion would remain at the level of policy and technique and would indicate how planning may help to solve these problems.

- (ii) The second category would comprise mainly officials of ministries other than the Ministry of Education, who are concerned with educational problems, at the administrator level and for whom information seminars would be organized. These seminars would not normally include specialists, as specialists are expected to undergo the courses indicated above. In cases, however, where they could not be released, they might also participate in such seminars. It is expected that, in the majority of cases, such seminars would take place at the national level but that the Regional Institute might participate in their preparation and organization. Such seminars would provide opportunities for these officials to meet their counterparts in the Ministry of Education. The seminars might last for one to two weeks.

Having convinced the participants of the necessity of co-ordination between the various departments, these seminars would attempt to arrive at concrete solutions. Emphasis would be laid on the fact that planning is necessary before action at all levels and that is an integrated process. The topics to be discussed might be somewhat similar to those for Category (i), but should be examined on practical considerations.

- (iii) A third category would comprise officials of the Ministry of Education, provincial administrators, supervisors, directors of schools and professors of teacher-training colleges. Associations of Teachers could also be included. The approach here would consist of lectures and workshops organized at the national or provincial levels, for a few days but not exceeding two weeks and preferably during the vacation period. While broadening the views of the participants on the changing role of education, such workshops would focus on immediate problems of planning in their respective areas of responsibility within the over-all system of social and economic planning.

- (iv) Although the above categories comprised essentially government officials, it was agreed that information should also be disseminated to persons outside the ministerial organization but concerned with specific or general aspects of education. In some cases, they might be included in the first two categories, but it was felt that they would not be much concerned with the problems of integration and co-ordination which would be the main topics of discussion



in the above seminars. For this type of person, one kind of seminar would not be sufficient but a number of them would be required, each focussing on a different aspect of educational planning. The following topics were suggested as suitable for discussion: (a) educational research in relation to educational planning (involving universities, research institutions, etc.); (b) enlisting public cooperation (with mass media specialists); and (c) manpower aspects (involving industrial managers, economists, specialists of vocational training and technical education).

In each seminar of two to five days' duration, outsiders could also participate along with the administrators of the educational system.

Such seminars should be supplemented by the distribution of appropriate material on problems of educational planning.

#### IV. RESEARCH REQUIREMENTS FOR EDUCATIONAL PLANNING IN ASIA

As far as research was concerned, it was agreed that a clear distinction should be made between:

- (a) The work necessary for the improvement of the training programme of the Institute, which would be in the nature of "studies" in whose conduct the Institute would play a direct and essential role.
- (b) Fundamental research concerning problems of educational planning which are not directly connected with the training programme of the Institute. The Institute could promote this type of research and co-ordinate it at the regional level.
- (c) The participation of the Asian Institute in international studies undertaken by Unesco's Office of Educational Planning.

#### A. Studies Related to the Training Programme of the Asian Institute

Three main principles were accepted with regard to studies of this type:

- (a) They should be problem-oriented and should contribute to the solution of the problems they study;
- (b) They should generally comprise collection or analysis of data;
- (c) They should be undertaken in close cooperation with other existing institutions, either in UNESCO (OEP, IIEP, the Bangkok Regional Office) or outside the organization,



The large number of suggestions made by the participants which are illustrative of the kinds of studies needed are grouped under three main headings : (a) Methodology, (b) Case-studies and data collection, and (c) Evaluation.

**(a) Methodology**

The following suggestions were made :

- (i) Studies concerning educational planning are often hampered by problems of vocabulary and of definitions. Further work could be undertaken in this field, including the preparation of uniform definitions, where feasible, for comparative purposes.
- (ii) It was also suggested that studies could be undertaken to establish some basic standards, such as pupil-teacher ratios, area per pupil, etc.
- (iii) Considerable attention was also to be given to the planning process, particularly as it prevailed in Asia. From the practical point of view, it was recognized that basic data required for planning are often missing and that a methodology should be developed, which would make some kind of planning possible without them.

**(b) Case-studies and Data Collection**

The following fields of study were mentioned :

- (i) School wastage ;
- (ii) Statistics : the collection of satisfactory statistics being essential for planning, the problem of their reliability and of their significance should receive more attention ;
- (iii) Cost of education and the problem of "productivity" (a preliminary study of this subject is being undertaken jointly by the Asian Institute and the Bangkok Office) ;
- (iv) Manpower information, such, for example, as would be recorded by a study of the follow-up of graduates at different levels ;
- (v) Assessment of the quantitative need for personnel specialized in educational planning ;
- (vi) Educational policies of the countries of the region ;
- (vii) Social and pedagogic data on changes and innovations in the educational system ;
- (viii) Improvement of the curriculum.

**(c) Evaluation**

The need for evaluation at different levels was considered by the meeting :



- (i) It was felt that it would be useful to devise methods or tests which would apply to an educational system as a whole and which would provide a basis for a preliminary assessment of its performance.
- (ii) It was also felt that, generally speaking, the trainees should be familiar with the techniques of evaluation, which are directly relevant to programmes or projects in their own country.
- (iii) It was suggested that one of the responsibilities of the Institute should be to evaluate its own training programme, by following up the work of the trainees after they had completed the course.

A significant contribution to the Institute's programme of studies could be expected from the trainees themselves. Information could be obtained from them on the planning situation in their respective countries.

It was agreed that the suggestions made by the participants were of an indicative character and that the Director of the Institute should feel free to adapt them in the light of available staff and financial resources.

## **B. Coordination of Research at the Regional Level**

In this connection, reference was made to the recommendations of the Bangkok Conference of Ministers of Education, which invited further research in the field of manpower planning, drop-outs and wastage, scientific testing and evaluation procedures, adult education as well as literacy programmes.

## **C. Studies undertaken by Unesco's Office of Educational Planning**

Two international studies are actually being carried out by the Office of Educational Planning :

- (a) *A survey of the situation of educational planning in the world for the preparation of which information sheets are being circulated to Regional Centres, experts in the field, etc.*
- (b) *Practice of educational planning in developing countries.*



## Educational Planning in the Industrialized Countries

When we talk of education and national development, our thoughts turn away from Europe to Asia, Africa and Latin America, the areas where education is battling the dire enemies of development—poverty, hunger, ignorance and disease, where the comparatively poor three-quarters of humanity, despite their struggle for advancement are growing comparatively poorer. Why this neglect of Europe, of industrialized societies?

### Dimension of the Problem

Perhaps because of the terminology we use in referring to so-called "developed" countries, perhaps because that terminology expresses a kind of deep rooted belief that these societies have solved all their really serious problems in becoming comparatively rich and in growing steadily comparatively richer, we tend to discuss the role of their educational systems almost exclusively in terms of past achievements and historical models for others to follow. We sometimes forget that the process of development poses for the industrialized, highly-advanced quarter of our globe a whole new series of problems, no less urgent because they are more complex, no less dramatic because the goals are more difficult to define, and no historical models exist to help in defining them.

These problems are often different from those faced at earlier stages of development; they call no less imperatively for decision and choice. They pose questions more of purpose and direction than of competing priorities, yet they demand immediate attention. And the development problems of the industrialized countries, like those of all countries, involve fundamentally and centrally the education system through which the accumulated experience of the human race is not only preserved and transmitted, but also renewed and restored, and education is no less fundamental to their solution...

Extracts from the opening address given by the Deputy Director-General of Unesco on 12 June 1967 to the Finnish Educational Planning Seminar organized by the Finnish National Commission for Unesco and Seinäjoki Summer University.



I believe the contribution which education is making to development in industrialized countries can and should be radically increased—by a deliberate effort to respond more adequately to three sets of growth problems : the economic problems of stagnation and under-development, technological unemployment and under-employment and skill shortages ; the social problems of community wastes, use of leisure, youth and special education ; and the international problems of economic equity and peace.

Such an increased contribution imposes a number of constraints on educational systems. It is these constraints and the adequacy of response to them that will determine, for industrialized countries and indeed for the entire world, the perspective of the future.

The first imperative that the industrialized country faces is the planning of education. Too long, in these countries, has planning been dismissed as a socialist fantasy or something smacking of under-development. It has been held that unplanned chaos is a mark of advancement, that the "laissez-faire" ostrich is the lamp post of development. These short-sighted ideas and misleading slogans now belong, I hope, entirely to the past in the industrialized countries. I, for one, take seriously the ominous paraphrase of Clemenceau's memorable words heard repeatedly in these countries : "Education has become too important to be left to the educator." Education is going to be planned for a variety of reasons. If educators do not plan education, it will be planned by the technocrat and the amateur.

### **Planning : A Tool, not a Master**

This does not mean that planning is a substitute for innovation—the outpouring of the free human spirit. Nor does it mean that from somewhere up atop, decisions on education will be handed down. Educational planning is a tool, not a master. It simply enables the alternative educational paths, which are consistent with national objectives to be set forth clearly, and so provides a rational basis for decision by the appropriate authorities. Its necessity follows the recognition that in the complex demand and supply relationships that comprise education, the market mechanism is incapable of functioning adequately and can provide no assurance that anything like optimum investment will be reached. What are these demand and supply relationships? They include technological unemployment, disguised unemployment, skill shortages, bulging defence and service-producing sector demands and reconciliation of all these production constraints with the all important demands of consumption education. But this is not all.

In terms of policy, educational planning must also assist in reconciling such contradictions as the objective of economic growth with the principle of equalization of opportunity, international understanding and co-operation with the need for national defence and integration, the increased payoffs to educational investment



in the developed regions of an industrialized country with the need to develop the backward areas and the nation's poverty pockets...

In all educational planning there is one risk. In the absence of planning, I should add, this risk becomes a certainty. The risk is that a given strategy with its priorities for action might sacrifice what is most fundamental to all education—its content and quality. In the last resort, what justifies the high investments in education prevalent in industrialized countries and what makes education a dynamic factor of growth and development is quality as well as quantity, the standards of education as well as the output in numbers.

Referring to the serious migration of talent and skill—the “brain drain”—from Britain to the United States, (it is estimated that 20 per cent of the annual output of 2,000 Ph.D. scientists so emigrate), Quintin Hogg, Minister of Science in the previous Government, declared in the February debate in the British House of Commons: “Our only prospect (to counter this outflow) is excellence in everything, politically, socially, economically and technologically. Three broad conditions are necessary for that. A first-class system of primary education is the first.” And that is where educational planning begins.

The price of quality is eternal vigilance. The continuing breakthroughs in content and methods in many subjects make it vital to up-date teaching programmes in schools and colleges. The methods of learning and the techniques of instruction are also undergoing rapid change and need similar evaluation and up-dating. Referring to the use of new media by industrialized countries, Wilbur Schramm describes the development in graphic terms. Italy uses them to make up for a shortage of secondary schools; Japan to provide further education for young people who have full-time jobs; and Washington County (Maryland) in the United States is using six channels of closed-circuit television throughout the school day to make expert teachers available in the classrooms, where otherwise their specialities would not be taught as well.

A number of courses have always been considered necessary to general education courses—namely mathematics, history and science—not merely because of their practical value but also and primarily because of their contribution to the individual student's culture and mental discipline. This means that in contrast to my own school days, when language and literature were compulsory and a choice had to be made between science and mathematics or history and arts, there is need today for the educationist to re-examine the content of general education. In view of the diversity of life and complexity of problems confronting contemporary man, why should not courses which have greater practical value and increasing social meaning be evolved to deal with these problems and likewise be considered compulsory. These matters have been under discussion long enough, now for over a century and a quarter. Grundtvig started the debate in 1840 in Denmark. Is it not time that they should



pass from the desirable to the necessary and from there on to being considered compulsory, just as elementary education itself has passed from being considered desirable, to necessary and now to being compulsory?

### **The Machinery for Innovation**

More generally, curriculum reform and development require the urgent attention of industrialized countries as part of the ir educational policy and planning. The curriculum must be continuously adjusted to meet the new and different interests represented by their expanding school population. It must provide for the incorporation of new knowledge and for reinterpretation and re-orientation of the existing corpus. It must enable the identification and nurturing of individual and unusual talent. It must mobilize the wealth of knowledge and experience of the teaching profession in the planning and execution of these tasks.

Indeed it is time for the very machinery for continuous reform, revision and updating of the content, the teaching techniques and the learning methods of education to be provided in every industrialized country. Such machinery must rely for its substance and technical guidance on the research work and potential of the universities. The university tradition of being in the vanguard of human knowledge, probing into the unknown and providing stimulation for young inquiring minds, as well as an association and inter-action between different disciplines, places the university and its research resources for educational and scientific content and methods in a key position. And as the portals of the university open out to the community on the one hand, and industry and governmental research establishments on the other, the resulting cross fertilization can only enhance the service of the universities to the reform movement in education.

This contribution of universities is part of a larger contribution that they must make to growth in the industrialized countries. And that contribution is to humanize technology, to ensure that growth serves its objective, which is man.

[Unesco Features—July (II) 1967.]



## Adult Education

**Literacy as a Part of the Continuing Education of Adults.** Obviously, literacy education should be seen as the first step within a broader programme of the continuing education of adults. This concept has been repeatedly emphasized and reaffirmed at international conferences, among them the World Conference on Adult Education held in Montreal in 1960, the World Conference on Literacy and Society held in Rome in 1962, and the Regional Conference on the Planning and Organization of Literacy Programmes in Africa held in Abidjan in 1964.

It was stressed in the outline plan for African educational development, adopted by the Conference of African States held in Addis Ababa in 1961, the adult education programmes must go beyond the teaching of reading and writing and numbers. For persons with little formal schooling, such programmes must provide a continuing education related to the activities of adults in their everyday lives. They must also promote a progressive understanding of the great social and technical changes taking place in Africa.

**Literacy as a Capital Investment.** The 1961 Conference of African States states in its Outline Plan for African Education, that 'a literate population is essential to the economic development of emerging States'.

**Definitions of Functional Literacy.** A meeting of experts on literacy held by UNESCO in 1962 recommended unanimously that the objective of 'functional literacy' should be defined as follows :

"A person is literate when he has acquired the essential knowledge and skills which enable him to engage in all those activities in which literacy is required for effective functioning in his group and community, and whose attainments in reading, writing and arithmetic make it possible for him to continue to use these skills towards his own and the community's development.

"In quantitative terms the standard of attainment in functional literacy may be equated to the skills of reading, writing and arithmetic achieved after a set number of years of primary or elementary schooling."



The 1962 World Conference on Literacy and Society held in Rome took literacy to mean the fluent reading of ordinary newspapers or the equivalent of five years' ordinary schooling.

From the Philippines comes the following definition of literacy for good citizenship: 'A good citizen should be able to read with understanding newspapers, bulletins, advertisements, tax notices and letters, and to write an ordinary letter.'

This is the type of goal which is aimed at by most national literacy programmes, although it would be undesirable to give too much publicity to the objective of the citizen's ability to read tax notices.

**Literacy Programmes in a Wider Context.** But, as has been repeatedly stated, the mere attainment of literacy by an adult should not be a goal in itself. Adult literacy work cannot be seen in isolation and must lead on to continuing adult education. There are various terms such as social education, basic (or fundamental) education, mass education, or community education which have been used to describe this wider process. It must be seen as a whole, right from the initial stages of literacy work up to work of a university level in an extramural or extension class.

**Adult Education.** The World Conference on Adult Education held in Montreal in 1960 describes the role of adult education in the following terms:

"The best in the traditional culture of each country should be preserved and enhanced, and people should be encouraged to feel pride and dignity in their own cultural heritage. People must be encouraged to understand and promote change. Every man and woman should have opportunity for individual personal development, to the utmost of which he or she is capable, to become a mature and responsible person. In education man must be subject, not object.

"Adult education is needed to promote international understanding, mutual sympathy and tolerance of different points of view and to put every adult in the way of arriving at the truth.

"Through adult education, deficiencies in earlier formal education must be made good.

"It can also be a means of creating better understanding between divided groups in society, for example, between different generations.

"Every adult must be able to equip himself or herself to play as full a part as he or she wishes to take in social and civic life.

"Every adult should have the opportunity of discovering how he or she can most satisfyingly and recreatively use his or her leisure."



Second World Conference on Adult Education in 1960 observed: "Adult education alone can meet the needs of our situation here and now and it must be accepted as a normal and necessary part of the sum total of educational provision. That is its role in a changing world."

The International Committee for the Advancement of Adult Education (1961) says: "Adult education must be seen as a part of the total educational provision ranging from primary school to university. It would be a bad mistake to regard education as being divided into separate compartments."

The same committee states: "Adult education should enable everyone to study his or her role as a parent and as a member of a community, as a wage-earner and as a responsible citizen. It must also give opportunities for vocational employment."

**Several Causes of Reluctance in Adults.** The 1962 World Conference on Literacy and Society held in Rome distinguished the major causes of reluctance in adults towards coming to literacy classes as follows:

(a) The environment of the illiterate adult does not seem to him to require literacy in order to bring immediate changes in the standard of living.

(b) The problem of earning a living is so acute that the adult does not have sufficient time or energy to come to the class.

(c) The adult illiterate often feels that it is too late to learn to read and write anywhere.

(d) The individual going to class may find himself in the minority and accordingly an object of suspicion by the majority.

(e) Social customs and traditions may make such demands upon the time of the adult that he is unable to attend classes regularly.

#### RECOMMENDATIONS OF THE WORLD CONFERENCE OF MINISTERS OF EDUCATION ON THE ERADICATION OF ILLITERACY (TEHERAN, SEPTEMBER 1965)

The World Congress of Ministers of Education on the Eradication of Illiteracy, convened by the United Nations Educational, Scientific and Cultural Organisation in Teheran from 8 to 19 September 1965 on the gracious invitation of His Imperial Majesty the Shahinshah of Iran:

Considering that the Universal Declaration of Human Rights proclaims that everyone has the right to education. Considering that the Constitution of the United Nations Educational Scientific and Cultural Organisation proclaims that the whole diffusion of culture and the education of humanity for justice and liberty and peace are



indispensable to the dignity of man and constitute a sacred duty which all the nations must fulfil in a spirit of mutual assistance and concern.

Noting that the attainment of literacy by the hundreds of millions of adults who are still illiterate is of fundamental importance for full economic and social development and that without it there can be no complete and active participation of the peoples in national or international civic life.

Noting that illiteracy, which more particularly affects the populations of developing countries and the women of many countries, accentuates the unfavourable position of these people who thus suffer from a form of *de facto* discrimination which must be eliminated.

Convinced, further, that illiteracy affects not only the people directly involved but the whole of mankind, whose progress it impedes, and that all nations must cooperate in the fight against this evil.

Desirous of asserting the principles that should govern the struggle to eradicate illiteracy and of defining the measures, national and international, that should be taken in this regard.

Adopts the following general conclusions and recommendations.

### **I. The Place of Literacy Work in National Efforts**

The development of the modern world, the accession to independence of a large number of countries, the need for the real emancipation of peoples and for the increasingly active and productive participation, in the economic, social and political life of human society, of the hundreds of millions of illiterate adults still existing in the world, make it essential to change national education policies. Education systems must provide for the educational training needs of both the young generations who have not yet begun working life, and the generation that have already become adult without having had the benefit of the essential minimum of elementary education.

There is no contradiction between the development of the school system, on the one hand, and of literacy work, on the other. Schooling and literacy work supplement and support each other. National educational plans should include schooling for children and literacy training for adults as parallel elements.

**Adult Literacy and Economic Growth.** Adult literacy, an essential element in overall development, must be closely linked to economic and social priorities and to present and future manpower needs. All efforts should therefore tend towards functional literacy. Rather than an end in itself, literacy should be regarded as a way of preparing man for a social, civic and economic role that goes far beyond the limits of rudimentary literacy training consisting merely in



the teaching of reading and writing. The very process of learning to read and write should be made an opportunity for acquiring information that can immediately be used to improve living standards ; reading and writing should lead not only to elementary general knowledge but to training for work, increased productivity, a greater participation in civil life and a better understanding of the surrounding world, and should ultimately open the way to basic human culture.

**Integration of Literacy Programmes.** Literacy teaching should be resolutely oriented towards development, and should be an integral part not only of any national education plans but also of plans and projects for development in all sectors of the national life. In view of mankind's needs today, education can no longer be confined to the school ; the necessary promotion of adult literacy makes it essential to integrate all the school and out-of-school resources of each country.

Functional literacy for adults must, moreover, involve the whole of society and not governments only. It demands the co-operation of all the forces in the nation and, in particular, local authorities and communities, educational, scientific and cultural bodies, public and private enterprises, non-governmental organisations, political groups, religious movements, women's organisations, and so on.

**Mobilisation of Human and Material Resources.** The main responsibility for the struggle against illiteracy rests with the countries which still have illiterates among their populations. The mobilisation of the human and material resources of these countries is fundamental to the success of the efforts that should be undertaken by all mankind with a view to eradicating this evil.

## II. Utilisation of Different Means, Methods, Structures and Techniques

**New Techniques.** The disproportion between the immensity of the task to be accomplished and the limited material and human resources of the developing countries, and the introduction of new elements in literacy policy, including the transition from rudimentary to functional literacy and the diversification of literacy programmes, call for new solutions to the problems involved in the training of instructors and the selection of techniques and in the educational infrastructure needed to overcome illiteracy.

**Personnel Needed.** The new concept of functional literacy makes it necessary to reconsider the question of the personnel needed to carry out programmes. To ensure the full mobilisation of resources, the teachers must be supplemented not only by specialised instructors or, if they are not available, by specially trained voluntary workers, but also by the members of all the groups that make up the educated sector of the national community.



**Forms of Literacy Programmes.** Functional literacy depends for its success upon an appropriate infrastructure, on-the-job educational facilities, out-of-school facilities in the villages and towns, and so on. It also presupposes the use of schools as literacy centres and the creation of a number of services specialised in research and in the preparation of teaching and reading material and publications. The literacy programmes should be considerably enlarged and the duration of teaching extended accordingly.

**Programmes Suited to Adult Psychology.** To be effective, literacy work demands programmes sufficiently diverse in form and content to take account of differences in age, sex, condition, environment, the field of interest of the adults concerned, their motives and immediate employment openings. This diversity presupposes research into the psychological and social characteristics of the different categories. In addition, the existence of many linguistic groups and the determination of many governments to provide literacy training (and adult education) in the mother tongue of the people concerned will probably involve special linguistic studies and the transcription of non-written languages.

The elaboration of teaching methods adapted to the mental habits of adults, to the psychology and way of life of the different social and occupational groups and to the actual content of this new teaching constitutes one of the major tasks of modern pedagogical science. Literacy and adult education techniques, reading materials and the texts used need greater diversification so that they can be adapted to the differing needs of each society.

**Judicious Combination of Traditional and Modern Techniques.** The need to carry out an immense task within a short period demands that traditional techniques be judiciously combined with the most modern ones. The lack of qualified teachers, the need to reach millions of illiterates scattered over vast territories, and the power and attraction of sound and image speak in favour of using non-conventional means of communication and modern techniques, e.g., radio, television, films, the press, including pictorial newspapers and certain forms of programmed instruction. Indeed, their utilisation will add a new dimension to adult education. But the massive use of such media to create suitable motivations for learning and provide education, in areas having a high proportion of illiterates, will require experiment and a very careful evaluation of its results.

**Systematic Evaluation.** The immensity of the task and the degree of social involvement required for its accomplishment make very necessary the judicious use of acquired experience. A series of thorough investigations and a scientific evaluation of programmes and their economic, social and education aspects should therefore be carried out.

The evaluation should make it possible to compare the results of programmes carried out in different countries, and to estimate the



return on investment and the effectiveness of the means used, direct and indirect, long term and short term.

The results of these studies and evaluations should be made available to those who, throughout the world, have a direct or indirect interest in the problem of illiteracy.

### III. Role of International Cooperation, Bilateral and Multilateral

(a) Although the chief responsibility for the struggle against illiteracy lies with the countries which still suffer from it, the assistance of the international community as a whole is essential to the success of this great undertaking.

(b) Obviously, every country that is fighting against illiteracy among its people must define its needs and priorities and draw up its plans, and so determine the direction of bilateral and multilateral aid.

(c) An important and early feature of international co-operation should be the exchange of experiences and closer contacts between the countries concerned. The similarity of aims and the variety of solutions chosen make it desirable to strengthen this co-operation between the developing countries.

(d) In determining the priority to be given to literacy work in their bilateral aid programmes, developed countries should take account of the priority fixed by the developing countries which are to receive that aid.

(e) The contribution that literacy can make to the modernisation of agriculture, industrialisation, the increased mobility of labour and the strengthening of international trade justifies an increase in international trade and justifies an increase in international assistance at the preinvestment level. It would be desirable for the United Nations Special Fund to extend its assistance by providing aid for an increasing number of experimental literacy projects carried out in accordance with UNESCO's programme and by including literacy work in various preinvestment projects.

It is highly desirable that UNESCO should be enabled to expand and to extend to a greater number of countries the excellent experimental world literacy programme adopted by the General Conference at its thirteenth session.

(f) To the extent that literacy is essential to the implementation of economic development projects, particularly agricultural and industrial projects, international and regional authorities which have investment funds at their disposal should devote a part of them to literacy work.

(g) The complex nature of literacy work and the many different responsibilities involved in carrying it out call for close cooperation



under the aegis of UNESCO, between all the competent international organisations and agencies and in particular the various Specialised Agencies of the United Nations.

(h) It is adjudged desirable that bilateral cooperation programmes and international assistance programmes should be properly fitted into national programmes ; here again, UNESCO can play an important part as a catalyst.

(i) In accordance with its mandate and in view of its past and present activities, UNESCO is called upon to play a vital role in the world struggle against illiteracy and in the concerted action which this implies. UNESCO should take action (1) to promote exchanges of information and a knowledge of the most fruitful experiences ; (2) to encourage and organise study of the different aspects of literacy work throughout the world ; (3) to carry out a comparative evaluation of the different structures, means, and methods of functional literacy work ; (4) to further the training of the personnel required for the implementation of functional literacy programmes ; (5) to advise Member States in the preparation and implementation of literacy programmes ; and (6) to encourage and sustain public determination to continue and intensify national efforts and international cooperation until illiteracy is eradicated. For this, UNESCO must be able to devote more substantial means to the struggle against illiteracy, both through the commitment of more of its own resources for the purpose and through the receipt of additional external resources.

The Teheran Conference of 1965, "convinced that the struggle against illiteracy, aimed at the total eradication from our planet of the scourge of ignorance, is a moral imperative for our generation," concluded its recommendations with :

#### **A. Solemn and Urgent Appeal**

To the United Nations, its Specialized Agencies and, in the first place to Unesco ;

To regional bodies concerned with development in general and education in particular ;

To non-governmental organizations which include assistance, direct or indirect, to education in their operational programmes ;

To religious, social and cultural institutions ;

To national and international foundations, both public and private ;

To educators, scientists and scholars, to economic and trade union leaders, and to all men of goodwill ;

To do everything in their power to arouse public opinion with a view to intensifying and accelerating the world-wide attack on illiteracy ; and in particular to exert their influence on all responsible leaders :



- ☐ To ensure that literacy work is an integral and essential part of every development plan in countries where illiteracy is rife ;
- ☐ To increase, so far as may be practicable and appropriate, the national and international resources set aside for the fight against illiteracy ;
- ☐ To make possible the provision of additional resources for development in general and for literacy work in particular as and when further funds become available through a reduction of military expenditures or for other reasons ;
- ☐ To harness to the full all available information media for propagating the new concept of adult literacy ;
- ☐ To ensure that priority in the allocation of available resources is accorded to the fight against the great human afflictions that constitute a major threat to peace, namely hunger, disease and ignorance, among which illiteracy occupies a place of key importance.

### **Programme in Action**

Two months after Teheran, the programme was endorsed by the United Nations General Assembly. Then, in January 1966, the governing council of the newly constituted United Nations Development Programme, at its very first session, allocated nearly \$3.8 million for the first three pilot projects in Algeria, Iran and Mali. This was the first time that large sums from international funds for economic development and pre-investment had been earmarked for literacy. At its second session in June 1966, the governing council allocated a further total of \$2,350,300 for two more similar pilot projects in Ecuador and Tanzania.

In all five cases the projects form part of the national development plan, and the governments are making very considerable contributions themselves : together they amount to nearly \$16 million, with Iran and Ecuador more than equalling, Algeria and Mali more than doubling and Tanzania more than quadrupling the funds allocated to them by the United Nations Development Programme.

In Algeria, where in 1965 it was estimated that over 80 per cent of the adult population were illiterate, the project is spread over five years. The National Literacy Centre set up in 1965 is devoting its first year to producing teaching materials and training instructors. Then, while the centre is expanded and developed, intensive literacy training will begin in three areas, one agricultural, one industrial and one with both agriculture and industry. By the end of the operational phase in 1970 there are expected to be 2,000 instructors in the field, one in each village or urban district in the areas concerned.

In Iran the project consists of two separate four-year experiments, one in an oil-producing region in Khuzistan recently selected as a pilot area for economic development, the second among



industrial workers in the ancient but now rapidly expanding city of Isfahan.

The third project is being carried out in Mali, a predominantly rural country with an 80 per cent adult illiteracy rate. It will comprise two five-year experiments, the first concerning 100,000 agricultural workers in the region of Segou, and the second to affect three-quarters of the 8,500 illiterate workers employed in about twenty State-controlled enterprises in the industrial zone of Bamako.

In Ecuador a five-year literacy project is to be carried out in three different zones and forms part of a ten-year development plan. The over-all objective for the project is to give literacy training or basic education to some 40,000 adults in 1,270 centres.

In Tanzania, the pilot project is to be integrated with the five-year development plan launched in 1964, and located in a priority development zone south of Lake Victoria. The region is primarily agricultural, but the national plan provides for a certain amount of mechanization and industrialization. The project, which will be carried out with the participation of cooperatives and trade unions, is expected to affect the lives of between 200,000 and 300,000 people.

Unesco is also providing expert advice for a sixth project now being launched in three areas of Venezuela where government development programmes are already under way.

Provision is made in each of these projects for the evaluation of results, and the direct and indirect contributions of literacy to development will be assessed. The lessons learned will eventually be applied to the problems of other areas. The long-term aim is to establish methods and mobilize support for an effective attack on illiteracy on a world-wide scale.



## Winding Them up for Life

### The Success Story of Denmark's Schools for Young Adults

A Danish idea which other countries might well consider "importing" (indeed many have already done so) is that country's striking contribution to adult education—the *folkehojskole*, literally but inadequately translated as 'folk high school'.

Inadequately, because they are not 'high schools' in the English sense of the word: their students are all past school age, they have considerable choice in the subjects they study, and there are no examinations. Nor do the schools award final certificates or diplomas, for the education they offer is not intended to be of *direct* use in a student's career or profession; nor yet do they attempt to provide a potted version of the academic education offered by the universities.

### Preparing the People for Democracy

The folk high schools were started in the middle of the last century to broaden the general education of young farmers during the long winter months when there was little to do on the land. Conditions in Denmark at that time were comparable to those in some developing countries today: the economy depended almost entirely on agriculture, formal education ended at an early age, and democratic institutions were only just beginning to appear. The idea came originally from a remarkable poet-priest, Nicolaj Grundtvig, who was afraid that democracy would prove to be meaningless unless the people were better prepared for the important role they had to play. "They must be made ready", he said, "for life in a society of free citizens—a life in which we all have the possibility and the duty to participate." And the age for real learning, maintained Grundtvig, is not childhood but early adulthood.

Grundtvig's writings and influence led to the founding of a Folk High School for young adults at Rodding in south Jutland as early as 1844, though it must be said that this first school was launched on a wave of local patriotic feeling, for the increasing Germanization of Slesvig at that time was seen as a threat to Danish culture and national identity.



Much of the credit for the ultimate success and popularity of the folk high schools must go to Christen Kold, a schoolmaster from a humble background whose unconventional methods had frustrated his teaching career. Kold shared most of Grundtvig's ideas, but he was of a more practical turn of mind and above all closer to the people than the clergyman. With his savings and Grundtvig's financial support, he founded, and helped to build with his own hands in 1851, the Folk High School at Ryslinge, which was to become the model for all later folk high schools down to the present day. It was above all due to Kold's enthusiasm and personal qualities that the idea took root in the farming community—an indispensable factor in its success.

### **Kold's Idea : A Second Home**

Kold's schools—he founded another, larger one in 1862—were boarding schools (a tradition which has been maintained), and his idea was to create a kind of second home, with teachers and pupils eating at the same table, sleeping under the same roof and sharing their leisure activities. The purpose was not just to increase the young people's knowledge, but also to stimulate their interest in human and social questions and encourage them to take an active role in the new democratic society—to make them, in short, more complete and more useful citizens. What he wanted to do, as Kold explained to an enquiring farmer, was “to wind his pupils up so that they would never stop again”. With this stress on firing the enthusiasm, it was not surprising that book-learning was—and still is—reduced to a minimum ; Grundtvig and Kold believed that the spoken word, and not the written word, was the best vehicle of education. However, he did train his students to become *readers*, and on their return home their minds stayed open to new ideas : a magazine for young farmers, introducing new agricultural techniques, was widely read and had an important influence on the development of agriculture.

The fact that until recent years all the students at folk high schools came from farming families had its drawbacks : townspeople looked on the folk high schools as “rustic” institutions, and only lately has this prejudice been overcome. But nowadays, while virtually every young farmer still attends a folk high school, there is a considerable proportion of young people from the towns.

In Denmark today there are nearly 70 folk high schools run on the pattern set by Grundtvig and Kold, not counting several similar schools run by the Church and by workers' associations. While their students are no longer drawn exclusively from the rural population, their aims and their approach remain more or less unchanged. Some of the subjects taught have of course changed with the years—religion, for instance, no longer has the same place in the curriculum it had a hundred years ago.

What do folk high school students learn nowadays ? Individual schools differ, but here is what the school at Herning, one of the



most modern (it was founded in 1961), is offering. First, there are compulsory subjects : Danish (concentrating on either the written language or literature), and a foreign language (choice of English, French, German and Russian) ; as well as civics, foreign affairs, current affairs and cultural history, on which lectures are given by politicians and other visiting experts.

Then there are subjects from which the student must choose a certain number, including literature, economics, psychology, law, comparative religion, the history of philosophy, sociology, study of consumer habits and the history of the wartime occupation of Denmark.

### Informal Study Circles

Herning, like many other folk high schools nowadays, encourages its students to form study circles—small informal groups with the emphasis on participation rather than passive learning. Some of the optional subjects suggested for group activities at this particular school are physics, dramatics, appreciation of art and music, textile printing, pottery, typing and first aid. Herning also provides sports facilities, art studios and music rooms.

This is a typical curriculum for a winter course, which may last from four to six months. In the summer, folk high schools offer shorter courses, including some for older people and several designed for families, with classes on child psychology, the family and society and other subjects of special interest to parents. These family courses have become very popular in recent years ; they last a fortnight and at most schools parents can bring their children, who are looked after in a nursery during the classes and lectures. In summer and winter, the majority of students are young people between 18 and 25 who already have a job and go back to it after the course.

The schools are still privately run, but the State subsidizes them heavily (up to about 90 per cent of the total cost) and provides grants for the student's board and lodging. The winter courses attract about 7,000 young men and women every year—about one-tenth of their generation. Many more attend the shorter summer courses, with Askov, the largest school, receiving some 2,000 students every year.

The folk high school idea has been taken up by many countries outside Denmark. The other Scandinavian countries were the first to follow, and there was little need for adaptation to local conditions. Holland, Germany, Poland and France are among other European countries where there are institutions for adult education inspired by, rather than copied from, the Danish model. The idea has spread overseas too, notably to India and Ghana.

One of the most remarkable achievements of the Danish system has been to create a genuine desire for information and knowledge



and an interest in civics and the workings of democracy. Right from the early days, former folk high schools students have played a large part in the cooperative movement, and in the founding of workers' colleges, youth groups, continuation schools (*efter skoler*), evening classes, village clubs, choral societies and so on.

### **New Directions**

Today, as education becomes more and more specialized, the value of the broad general education with the accent on community participation which the folk high schools offer is being increasingly recognized. Nor is the system static: new forms of folk high school are springing up to meet modern needs, such as those in Denmark with an international flavour which invite young people from other countries (the teaching is in English); the seven folk high schools in Sweden which take part in the Unesco Associated Schools Project for education in international understanding; or the special one planned in Finland for mentally retarded youngsters who have been unable to continue their ordinary education beyond primary school.

When Unesco convened the first World Conference on Adult Education in 1949, it was not by chance that Denmark's first international folk high school at Ælsinore was chosen as the meeting place. Unesco's Director General at that time, Jaime Torres Bodet, pointed out that adult education should not be a mere 'ornamentation', but a vital function of civilized societies. Denmark is certainly one of the countries where this ideal has found roots, thanks largely to its folk high schools and the vision of the men who began them.

(UNESCO FEATURES, No. 494/495.)



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## Museums and Development

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The International Council of Museums (ICOM) celebrated its twentieth anniversary in 1967 with the launching of the second international museums campaign, officially inaugurated in Warsaw on 1 October 1967 in the presence of distinguished men and women in the museums world. Many countries, anxious to seize the opportunity thus presented to emphasize the role of museums at the present time, have already announced that they will participate in these activities. It will be recalled that the first campaign was organized in 1956 by Unesco in cooperation with ICOM.

Since the First World War, museums like many other institutions have undergone considerable transformations in their aims and methods. They have had to adapt to the present-day needs of a vast public, and many of them have been able to do so. But while the impetus for such changes has come from museums themselves, there has often been little understanding among the persons responsible in each country for providing the material resources for putting them into effect. The aim therefore of this second international campaign is to determine the role of museums today and to draw up clearer directives on their functions. It may be useful in this connection to outline the policy and principal objectives of ICOM.

### **The Diverse and Living Role of Museums**

Are museums primarily a means of preserving the past, a source of aesthetic enjoyment? Are they unprofitable, outmoded institutions in an era of mass culture? This is the opinion in some countries which have sought new formulas, such as "cultural centres". Others, convinced that museums are an indispensable element of development in all domains, are doing their utmost to create new ones and give encouragement to museums by modernizing them and making them more attractive.

A museum demands neither the effort required for reading nor even the ability to read: compared with photographs and films, it has the advantage of presenting real, three-dimensional objects. It possesses its own particular language, or rather it allows the



object to speak for itself by displaying it in context. The museum in fact is flexible, varied and universal ; it embraces all the sciences and all aspects of human activity. It is a window on the world and on mankind. Half a billion people visit the world's fifteen thousand museums each year, and the number of visitors is increasing rapidly all the time.

As an *auxiliary to education*, the museum is a kind of visual university without examinations or diplomas ; it is open to everyone and it acts by osmosis on the mind of the visitor. It brings alive the most abstract concepts, inspires vocations and opens up broad horizons.

A *reflection of the past*, the museum establishes a link between vanishing traditions and a world geared to the future, thus ensuring the spiritual "comfort" of men who would otherwise feel isolated in a transient universe.

A *symbol of human society*, the museum strengthens the ties between men everywhere, beginning with members of a same nation. It enhances similarities and explains differences uniting or dividing the elements of a national community.

A *mirror of science and technology*, the museum helps man adapt to the future, demonstrates the needs of material development, explains the mysteries of everyday life. By displaying and commenting material objects in their appropriate setting, it brings abstract concepts within reach of all, from university graduates to the illiterate.

As a *sanctuary of beauty*, the museum offers man relaxation, an aesthetic pleasure to compensate him for the fatigue, irritations and psychological aridity of a life dominated by material problems.

No less important, though they may not attract as much public attention, are the other functions of museums. To fulfil their educational role and contribute to man's material and spiritual development, museums must establish collections and ensure their preservation and study under optimum conditions. The museum is not merely an exhibition hall : it also consists of offices, laboratories, workshops and storehouses all orientated to satisfying the requirements of the visitor. Each object must be received, studied, identified, catalogued, processed and perhaps repaired, classified and, if it is part of an exhibition programme, presented for display. It is therefore in the public interest that museums should be scientific institutions for the preservation of mankind's heritage. That heritage is vast and embraces all aspects of nature surrounding man, human evolution, man's achievements from earliest times, from the wheel to the steam engine and space rockets, from flint implements to the creations of modern art, from the legends of mythology to the symbols of contemporary social structures.



Apart from the services they offer us today, museums will be able, in future ages, to revive for our descendants the recent and distant past despite the destruction caused by industrial civilization, wars and ignorance. For this reason, too, the museum is and will remain, for scholars, a privileged field for research; its collections of material objects act as a corrective to abstract deductions, make possible the verification of hypotheses and provide a rich store of samples.

Museums contribute to development in all sorts of ways, often little known. They are not merely well arranged display windows, but highly complex institutions which, when properly planned and administered, respond to numerous present-day needs. It would be absurd to relegate them to the rank of survivals of the past. But if this is to be avoided, members of the public who at present satisfy their needs with photographic reproductions and literary descriptions must give them active support; curators must recognize their vocation as popularizers; and the responsible authorities must not look upon museums simply as an extra tourist attraction and neglect to furnish them with the funds essential for modernization.

### Future Prospects

One of the aims of the second international museums campaign is to make known these ideas which ICOM, in collaboration with Unesco, has for the past twenty years striven to put into practice. Despite its very limited resources and the difficulties inherent in the very nature of the museum—a term which embraces widely differing institutions—and despite a certain prejudice connected with a name which has become the symbol of “conservatism”, ICOM has already achieved positive results on the professional level. Moreover, exchanges between museums—of experience, persons, exhibitions, collections—are on the increase. And the growing number of meetings between professionals at all levels means that isolation, the major obstacle to progress, has been overcome.

Museology is now an international discipline whose principal representatives are no longer limited to nationals of countries where the first museums were established some two centuries ago. On the contrary, they are appearing more and more frequently in those regions where museums, because they are of recent date, have the greatest chance of fulfilling their true vocation, adapted to the modern world.

It is to be hoped that future developments will justify these efforts and the hopes placed in an institution which, alone on the international level, has a mission to preserve mankind's visible heritage, not for sombre reflections on past civilizations but for the harmonious material and spiritual development of the individual and society.

(By H. de Varine Bohan, Director, International Council of Museums; UNESCO CHRONICLE, Vol. XIV, No. 2, February 1968.)



## Documentation, Libraries and Archives

### **Recommendations of the International Advisory Committee on Documentation, Libraries and Archives**

The Committee was established in accordance with resolution 4.51 of the fourteenth session (1966) of the General Conference of Unesco, and it succeeds the former International Advisory Committee on Bibliography, Documentation and Terminology.

The functions of the Committee are to advise the Director General, at his request, on questions of documentation in general, and in particular those related to subject fields of interest to Unesco.

The first session of the Committee was held in Paris, at Unesco House, from 26 to 29 September 1967.

Among many other items on its agenda, the Committee carefully studied a report on Unesco activities in the field of documentation, libraries and archives and made suggestions on the programme of DBA for the coming years. The Committee recommended that priority be given to the following programmes : (a) Improvement in the planning of national, regional and international services ; (b) Training of personnel, including training in planning techniques, using traditional and new methods ; (c) Establishment of common minimum standards for the use of traditional and new techniques and for vocational training programmes ; (d) Organization of research centres in these fields ; (e) Evaluation and use of new documentary techniques and in particular of data-processing considered as an essential instrument for the development of documentation.

The Committee showed great interest in the project for the study on the feasibility of a world science information system and decided to nominate an observer to attend the meetings of the central committee of the project. The Committee also agreed that Unesco should take an active part in developing the project of shared cataloguing on an international scale through contacts with the U.S. Library of Congress and national and non-governmental bodies.



In conclusion, the Committee made a statement in which it stated the place of documentation work in the world today. In the Committee's opinion "Not only has it special significance in relation to science and technology, particularly in view of the rapid increases in knowledge arising from these activities, but it is also in a position to make vital contributions to all spheres of human activity. This is particularly important at a time when mankind is beset by so many problems, economic, social, political and even philosophical. The solving of many of these problems can be hastened by improved methods of communication between men and nations and not least by the integration of documentation, techniques, known and foreseeable, with all methods of advancing human knowledge. Particular attention should be paid to developing countries, which badly need Unesco's assistance in creating and equipping the structures necessary to hasten their development.

Documentation is so clearly a component of all Unesco programmes, that it and its associated activities in documentation centres, libraries and archives must not only be studied and developed with renewed vigour but also organized within the framework of Unesco itself to enable the Organization to make the contribution to all activities in this field that is so clearly possible.

### **Working Party on Educational Documentation**

Following the meeting of the International Advisory Committee on Documentation, Libraries and Archives, a Working Party on Educational Documentation was held at Unesco on 2-3 October 1967. Two members of the International Advisory Committee were invited to take part in the working party: Miss Josefa Sabor (Argentina), and Mr. Richard Dogbeh (Dahomey). A third consultant, Mrs. Zojica Levi, Head of the Documentation and Information Centre of Yugoslav Federal Institute for Educational Research was also invited to take part.

Principal topics of discussion were the improvement of educational documentation services, problem areas in educational documentation, and plans for regional and international action in educational documentation.

A distinct need for more information regarding national resources in this field was noted, and it was recommended that Unesco continue to gather information which should in turn be disseminated to experts working at both a national and an international level.

Specific problems discussed were the lack of understanding of the values of educational documentation, lack of trained staff at both national and international levels, lack of proper equipment, and, on an international scale, the problem of language. In terms of subject matter it was felt that documentation was either lacking or insufficient



on curricula and curriculum reform, rural educational programmes, and up-to-date statistics.

In conclusion it was recommended that Unesco continue to foster the establishment and/or improvement of national centres of educational documentation, encourage strong national centres to take on regional responsibilities, and help in meeting national needs through the production of abstracts and reference material (bibliographies, directories, etc.).

(Unesco Bibliography Documentation Terminology, Vol. VIII, No. 1, January 1968.)



## Education Enters the Machine Age

Once, the American student had virtually only three tools with which to help him learn : books, pencils and paper. Today, the equipment that surrounds him and aids his learning process can be as varied as his interests and as numerous as he can profitably use.

To distinguish between two major types of educational tools now in use, educators have adopted the terms "software" and "hardware". The software is made up of paper-based education programmes. The hardware takes in a galaxy of new mechanical and electronic devices. Most of the time, particularly for the more complicated devices, the hardware (*i.e.*, a machine) needs the software (a programme) to tell it what to do.

What has been called the "new" educational looks complicated—and it is. Let's just take software—newspapers, books, magazines, educational games, flash cards, sets of special materials which grow in difficulty as the student progresses, and of growing importance, computer programmes. Hardware? Well, that includes teaching machines of one kind or another, projectors, television receivers, phonographs, tape recorders, classroom kits of various kinds, language labs for the study of foreign languages through recorded tapes, and other sophisticated machines. What these devices and equipment now teach or may eventually be developed to teach covers a broad field of fundamental subjects.

All of this did not happen overnight. The predecessors of today's educational tools existed, in various stages of sophistication, for a decade and more. But the old has produced generations of the new and, to some extent at least, given way to the new. Even the textbook has been partially succeeded by the programmed book and the teaching machine.

All of this has both caused and been caused by two things : a dramatic surge in electronics and an equally dramatic surge in educational ideas. Electronics allowed us to produce the machines now being used in the classroom. Ideas showed us how to use them.



One idea was that education should be an individual activity to a much greater extent. Children should not all be forced to go through the same steps of learning at the same pace. The quick students will want to rush ahead. The slower ones will need more time.

Another idea was that children learn best in different ways and at different times. Some children learn best by listening—they may get comparatively little from reading the same thing. Other children are just the opposite—they need to see something written down in order to absorb it fully. The style of learning may change with age, too. Young children, the experts believe, learn best if they can handle and see and hear and smell, using all their senses in acquiring knowledge. As they grow older they are able to learn in a more abstract way.

A third idea was that learning can be accomplished faster and better through reinforcement. The well-known psychologist B.F. Skinner is often called the "father" of the teaching machine because his experiments taught him that learning could be enhanced if the knowledge to be learned were first broken into very small pieces and each piece presented so clearly and simply that the student could not make many mistakes. Each correct answer would be settled more firmly in the student's mind if he were reinforced in his learning, if he were praised for his correct learnings.

In the teaching machine developed by Skinner, the reinforcement consisted in immediately notifying the student that his answer was right, that he had learned something well. This strengthened his ego, provided him with satisfaction and—because the student would want to continue this gratification—produced the desire to learn more. The arrangement of the tiny bits of knowledge into a logical sequence was called the programme. The process was called programmed learning.

And the best programmes are conceived to be those that are so clear it is virtually impossible for the student to fail. Such a design ensures maximum correct answers, maximum reinforcement, maximum stimulus for the student to continue. Programmed instruction becomes a game in which the student can hardly lose. The more he wins the more he wants to win... and the more he wants to learn.

One other point should be noted—that the game is an individual game. The student is not competing with other students. He is playing the game by himself. What others do with their games does not slow him down or speed him up.

Not all of the new devices in the classroom are designed to be programmed. Some are simply tools with which to reach children at many ages. There are the simple wooden rods of varying lengths



and colours to show the relationship of numbers to reality graphically. There are the science kits which provide a simple microscope for each student in an elementary class. There are the individual reading booklets. These are items that appeal to the senses.

Whatever the sophistication of the devices, they are only as good as the planning that goes into their use as learning tools. Also, the newest of the new computers can be a complete failure in teaching unless it's been given a high-quality programme, unless it has a well thought out plan of learning to present and knows at which step to present what idea to each student.

In an elementary reading programme, for example, which the student might be able to complete in a half-hour, the computer must be given about 9,000 commands in order to function efficiently. According to reports, Dr. Patrick G. Suppes of Stanford spent something like six years in devising a computerized elementary mathematics programme.

Dr. Suppes was one of the early experimenters with computers in instruction. That was in the early 1960's at Brentwood School, Palo Alto, California. Today at Brentwood, a first class student taps out his code number and first name on an electric typewriter hooked to a computer. The machine responds by typing the student's last name. Then a taped voice built into the machine asks: "If you have three pineapples and two grapes, how many pieces of fruit do you have?" The student has 10 seconds to respond. Then the machine offers its congratulations on a right answer, its condolences on a wrong one, or, if there was no answer within the time limit, may simply invite the student to "Try again".

On a higher level of mathematics, the computer may ask a question and tell the student to choose from several possible answers displayed on a cathode-ray tube by touching it with a light pen, really a small flashlight to whose rays the tube responds.

If the student fails to respond correctly to a number of similar questions, the machine may branch off from the main line of the programme and switch the student into remedial work to clear up whatever difficulty he may be experiencing or to help him learn something he somehow failed to learn before. Once the difficulty has been corrected, the computer goes back to the point it began its remedial branch and continues to follow once more the main line of the programme.

The machine is indefatigable. It never gives up. It never loses patience. It's persistent, never tired or cranky. It's alert for feedback from the student using his answers to questions as triggers for its operations—its swift run-through if the student is quick, or its slow thoroughness if the student is slow. A slow student may see a brief movie or hear a tape recording, view a diagram or see a



printed explanation, all provided by the computer. The swift student may never know—or need to know—that these additional learning aids are there at all.

The strong suit of the teaching machines and the teaching computers has been in teaching facts or operations. Learning to judge, to analyze, to get along with others, to create through writing or art—these are still largely outside the province of the machine, although they are being worked on. One computer has experimentally been programmed to criticize spelling and grammar in student themes.

You might think that B.F. Skinner, whose findings provided a major push to the new education, would be delighted with the more sophisticated computers that have been developed. But not so. Computers for teaching, Skinner has been quoted as saying, are merely “a fad... Economically, computers are out of this world. A simple programmed work-book will do what these computers can do and do it better at one-tenth the cost. As a means of storing information, like a library, to quickly bring forth some audio or visual materials, or as part of a school and classroom management system, a computer can do a job. But as a teaching device it's ridiculous.”

But Brentwood School, where computer-assisted instruction began early, reports that first class students taught by computer had learned to read much more rapidly than a control group taught by conventional methods. And the computer-taught students remembered far more—nearly double—than the conventionally taught students.

The Skinnerian ideas themselves have not been sacrosanct, either. Noam Chomsky, a scientific linguist at the Massachusetts Institute of Technology, has criticized Skinner's belief in learning-as-behaviour and his assertion that verbal behaviour can be taught like any other behaviour. Chomsky asserts that “Skinnerian-type training is appropriate only to industrial workers who need to develop complex technical skills. Is growing up and learning no more than the shaping of behaviour? If that's what education is all about, authoritarian figures shaping people, then may be we don't need it.”

When Skinner-type teaching machines were first developed, teachers became worried. They—and many others—thought the teaching machine would replace the teachers, take over completely in the classroom and, what's more, possibly do a better job.

But it soon became evident that the machines were not fool-proof. If the programme that went into the machine was poor, no amount of flashing lights would make it any better or make the student learn. It soon became evident that new teaching devices could, in fact, free the teacher for better things—for planning more creatively, for planning more thoroughly, for devising exciting learning situations. But planning took time and, before the advent of the machine, there wasn't enough time.



Today, teachers are still somewhat worried, because the machines have grown in complexity and sophistication. The students, of course, have generally been delighted with the machines, excited by them, stimulated by them. Perhaps in many instances their increased classroom performance, attributed entirely to the machine, came because of the machine, but not intrinsically from the machine.

Psychologists in industry found some time ago that when any change is made in the working environment, if only the colour of the walls were changed, the fact of change and the knowledge they were part of an experiment had a stimulating effect on the workers. It is possible the same effect occurs with school-children in experimental programmes.

More important than the computer's help to student learning, some educators believe, may be its use in learning about learning. Educational researchers hope to use the machines to discover more precisely how people learn. In doing so, the teaching process as we have known it may itself be changed radically.

While the arguments go on, the developers of the computers and teaching machines and programmed books and recorders and projectors and games and kits and other equipment and devices by the score continue their work. And perhaps Robert W. Sarnoff, president of RCA which makes computers, is right. Sarnoff says: "One day man will look back and consider the introduction of computers in the classroom as significant a development as the introduction of textbooks some two centuries ago."

[Span, November 1969.]



## Higher Education by Post in U.S.S.R.

Of the 5 million students enrolled at institutes of higher education in the Soviet Union by the end of 1970, approximately half will be workers and employees studying part-time through correspondence courses or in evening classes organized in factories and offices.

Correspondence courses are organized at all levels of primary and secondary education (8 or 10-year school), both for general education and for the more specialized education provided by the "technicums".

But it is in higher education that correspondence teaching really comes into its own, especially in the fields of teacher training and technology. Courses are available in about 280 subjects through a whole network of specialized institutes, faculties and correspondence teaching services attached to the universities and technical colleges—in fact there are even branches of universities in the main towns and industrial centres.

The reason for the wide choice of possibilities in part-time education courses, is simply that the students' leisure time and their availability for attending classes vary according to their particular job—and according to the location of the college or institute.

Take, for instance, the case of school teachers who wish to improve their qualifications so as to be able to teach in the senior classes of secondary schools or technicums. They can enrol as correspondence students at any one of 200-odd teacher training colleges in the main towns of the Soviet Union; but during the summer vacation they have to attend courses and examinations which are held at the college.

### **At Factory and Farm**

For the fields most likely to interest industrial technicians and workers, things work rather differently. Here there are too many



subjects and specialities for there to be institutes and colleges conveniently placed for everyone. It would also be impossible to call all candidates for an examination at the same time without interrupting factory routine. For this reason, institutes of higher education have established study and consultation centres at each major factory and *kolkhoz*, where students can receive all the advice and help they need from qualified teachers. To enable them to prepare for their examinations, workers are given additional periods of leave with pay which can amount to a year's study over a five year course.

How many institutions for part-time education exist in the USSR at the present time? All but one of the 48 Soviet universities have a correspondence teaching service, as do 209 teacher training colleges in 193 towns, and two special institutes, one in Moscow and the other in Erevan (Armenia). There are also 70 agricultural institutes, 15 veterinary colleges, 20 forestry institutes and dozens of other schools, sending instruction by post to economists, planners, engineers, lawyers, ...

### **Largest College**

A special word must be added about the All-Union Correspondence Polytechnical Institute in Moscow which, during its 37 years of existence, has trained, for example, more than 38,000 engineers in 59 different fields. With its 42,000 students and 937 teachers, the Institute is one of the largest colleges in the Soviet Union. It maintains seven branches in other cities, 23 study centres, 105 laboratories, publishes its own textbooks and courses (387 works in 1969 alone), makes use of every conceivable modern method—programmed instruction, films, tape—and broadcasts courses over television.

Though their studies are made easier by the Institute's modern methods and techniques, the students' workload is still very heavy. Returning to academic study after an interval of several years (the majority are aged between 30 and 36), they have to spend most of their leisure time studying, despite their family commitments. Most of them stick it out and manage to pass their finals. Several of these 'pillar box' graduates have distinguished themselves in research or applied science. Some have been awarded the Lenin Prize. Virtually all were promoted in their jobs.

[Unesco Features No. 571, March (II), 1970.]



## Recent Educational Experiments, Innovations and News

### **1. Training Teachers in Combating Drug Abuse in the U.S.A.<sup>1</sup>**

As part of the US Government's expanded effort to combat drug abuse among the nation's youth the Office of Education announced the award of \$3 million in grants to train teachers and community personnel in drug education.

All 50 States will receive funds designed to help them strengthen their drug education programmes. More than 40 States are using portions of their grants to send teams of teachers and other personnel, including students, to one of four national training centres on drug education being conducted by the Office of Education.

The Office of Education anticipates that the 300 persons trained this summer will be able to prepare during the next school year approximately 150,000 teachers and 75,000 students and community leaders to promote drug education at the local level.

[Unesco Features, September (I), 1970.]

### **2. More than a-third of World's People Benefit from Unesco Free Flow Agreements**

Nearly 1,500,000,000 persons—more than a-third of the world population—get easier access to books and other educational, scientific and cultural materials, thanks to a decision of Unesco's General Conference, twenty years ago. On 17 June 1950, the delegations to the General Conference meeting in Florence unanimously adopted the text of the Agreement on the Importation of Educational, Scientific and Cultural Materials, the "Florence Agreement".

During the twenty years of its existence, more and more Member States have adhered to this Agreement which is now applied



by 60 countries. The most recent acceptance was officially deposited by Japan at United Nations Headquarters on 17 June 1970—the twentieth anniversary of the original adoption.

The so-called "Florence Agreement", which takes its name from the city where the General Conference was meeting, removes tariff and trade barriers from a wide range of educational, scientific and cultural materials. Among them, in addition to books, are newspapers, magazines, works of art, scientific equipment, antiques, materials for the blind and educational and scientific films and recordings. The Agreement also provides that Member States grant foreign exchange for the purchase of these materials as far as possible. It has been estimated that by removing tariff barriers on these instruments of knowledge, Unesco's Member States are foregoing customs revenue amounting to millions of dollars a year, since the international circulation of these materials totals 3% of all world trade. In so doing, these countries are giving reality to the basic Unesco aim set forth in its Constitution "to promote the free flow of ideas by word and image."

In a special ceremony held at the United Nations Headquarters on 17 June 1970, the representative of the Director-General of Unesco, welcoming the accession of Japan to the Agreement, declared: "It is our hope in Unesco that those Member States which have not as yet joined the Agreement will give renewed consideration to the possibility of becoming Contracting Parties to it. We trust that the message emerging from this modest ceremony, as we commemorate the twentieth anniversary of the Agreement, will be heard and acted upon, and so speed the day when the Agreement becomes a truly universal instrument for the dissemination of knowledge."

[Unesco Features No. 578/579, July (I/II), 1970.]

### 3. **World Rates Arms Higher than Schooling**

In 1967, the latest year for which full figures are available, the world spent \$127,869 million on public education—5.2% of its aggregate Gross National Product—according to the Unesco Office of Statistics. But in the same year, \$180,682 million—7.3% of the GNP was spent on armaments.

Of seven world regions, only two spent more on schools than guns: Africa, which spent \$1,576 million (3.5% of GNP) on education, against public military expenditure of \$1,061 million (2.4%); and Latin America, spending \$3,195 million (2.9% of GNP) on education, and \$2,468 million on armaments.

The source for the military data is the annual publication of the U.S. Arms Control and Disarmament Agency.

[Unesco Features No. 578/579, July (I/II), 1970.]



#### **4. Computerized School Reports in Germany**

In Germany, school reports were recently issued for the first time by a computer. The schools in Munich have been feeding their pupils' marks into the computer since the beginning of the school year.

The computer analysed marks for written work, exercises and oral examinations, and issued a report on each pupil with his final place in the class and one of eighteen general comments with which it had been provided.

So far, both staff and pupils are satisfied with the electronic reports, the teachers because it reduces their work load, and the pupils because the computer is completely impartial and thus "fairer than many teachers often are". The teachers however still reserve the right to check the computer's decisions and if necessary modify them.

[Unesco Features, No. 573, April (II) 1970].]

#### **5. Data Processing to be Compulsory in Japan's Schools**

From April 1973 all secondary school pupils in Japan will be required to attend classes in data processing. The subject is already taught in 14 secondary and a number of vocational schools in the Tokyo region.

[Unesco Features, No. 373, April (II) 1970.].

#### **6. New York's Unique 'College for Human Services'**

The Talent Corps was started by a handful of ladies in New York City in 1964 with the idea of training poor women for jobs as assistants to professionals in schools, hospitals and other social agencies.

Now, little more than six years later, it has evolved into a two-year "College for Human Services" that may become a model for some changes in American higher education.

Its students are adults (a few are men) between the ages of 21 and 60. Half were on welfare at the beginning of their training. Eighty per cent are Negro, 15 per cent are Puerto Rican. Most have families, and a-third have four or more children.

There are far more applicants than places—2,500 for 200 positions in 1968, for example. Students are chosen on the basis of simple written tests and a series of interviews. Only about half the students were graduated from secondary school. What admissions officials say they look for is interest, eagerness and social concern.



**Three Days of Work, Two Days of Study :** The curriculum combines work and study—three days of work in a school, hospital or other social institution alternating with two days of classes.

Everyone takes a “core curriculum” the first year. It consists of some psychology and readings in topics like education, sociology and social issues. Students prepare surveys of subjects like police and health services in communities or towns they chose. In theory, the academic work relates to experiences drawn from students’ job experiences. The teachers help design the first-year curriculum.

The second year consists of a variety of courses without a core programme. Most of the teachers are professors from universities in the New York City area.

Trainees are assigned to field work throughout the city. Of the 210 current first-year students, the largest group works in New York public schools, the next largest in hospitals and health services, with the others assigned to some 30 agencies.

A particular set of teachers, called field co-ordinators, supervises both class work for small groups of about 10 students. Co-ordinators visit co-operating agencies and institutions, set up the standards of the training jobs and try to keep in close touch with the students’ supervisors in the field.

As it has placed more and more people successfully, the Talent Corps has established valuable contacts and acquired reputation in the city. Most of the teachers in schools the Talent Corps works with, are eager to get more student assistants. And hospitals likewise are pleased with their experiences with Talent Corps trainees.

The Talent Corps’ reputation, in fact, is spreading beyond New York. It received nation-wide publicity in September 1969 when the *New Republic* magazine carried a lengthy, laudatory article on it by Joseph Featherstone, an eminent critic of American education.

Mr. Featherstone concluded his article by reporting that : “The trainees are good, the education they are getting is good, and the problems usually centre on meshing study and work and getting places in which people can learn as they work.”

Most of the Talent Corps’ operation is financed by the Federal Government through the Department of Labour’s “New Careers” programme, an attempt to use education as a means of training poor people for a host of new “paraprofessional” jobs as assistants to professionals.

The Talent Corps is in many respects a refinement of ideas dating from the early 1960’s when a number of theorists and sociologists began proposing the creation of new careers for the poor,



setting up permanent jobs in various understaffed human service areas of the economy, jobs that would include promotions and on-the-job training, allowing able trainees to rise to professional positions.

The Talent Corps is the only "New Careers" programme that has been recognized as an official institution of higher education. It is receiving a charter from the New York State legislature to grant its students associate two-year college degrees.

This represents a giant step for the Talent Corps, and could be the beginning of a new development in American higher education, since New York is a pace-setting State for the nation.

[Unesco Features, No. 573, April (II), 1970.]

## 7. Education for Self-Reliance in Tanzania

The key word which involves everyone from President Julius Nyerere, whose proudest title is Mwalimu ('teacher' in Swahili), to the humblest teacher in the bush, is self-reliance. The word, applied to the current educational reform here, covers a coherent re-examination of the school system, its syllabus, examinations and above all its goals. President Nyerere, himself a teacher before he assumed executive leadership when his country became independent, set the tone in a policy paper titled "Education for Self-Reliance".

"It is now time that we looked again at the justification for a poor society like ours spending almost 20% of its government revenues on providing education for its children and young people, and began to consider what that education should be doing. For our circumstances it is impossible to devote 147,330,000 shillings (over \$20 million) every year on education for some of our children (while others go without) unless its result has a proportionate relevance to the society we are trying to create."

"This means that the educational system of Tanzania must emphasize co-operative endeavour, not individual advancement," President Nyerere made clear in a recent interview with a group of education writers.

**The Privilege of Education.** "Those who receive this privilege," the President declared, "therefore have a duty to repay the sacrifice which others have made. They are like the man who has been given all the food available in a starving village in order that he might have the strength to bring supplies back from a distant place. If he takes the food and does not bring help to his brothers, he is a traitor. Similarly, if any of the young men and women who are given an education by the people of this Republic adopt attitudes of superiority, or fail to use their knowledge to help the development of this country, then they are betraying our Union."



The switch of stress from academic education to vocational and agricultural training is evident in various activities in schools where pupils besides basic academic subjects are taught to work in the fields. Since these pupils will stay in the villages rather than flock to the cities, entrance to primary schools is being raised from six to seven years, and even higher in some schools so that, when pupils leave after seven years, they will be ready for employment.

**Teaching for Life on the Land.** Typical of the way the local school fits into the concept of self-reliance is the rural primary school of Badugu, some 60 miles from Mwanza, on the beautiful but bilharzia-infested Lake Victoria. It boasts two adobe classroom buildings built by the villagers themselves. The school with 315 pupils also has housing for the seven teachers. Since only 700 of the 5,000 primary school leavers in the Mwanza region entered secondary school last year, it is clear that all but a very few pupils at Badugu will stay in the villages. Pupils therefore are being trained on the school's own two-acre cotton field and a four-acre field where maize is grown. Last year, the school raised 600 shillings (about \$85) by selling their cotton.

The pupils at Badugu are lucky to have a school. They are lucky to have parents who understand the value of schooling and able to pay even the modest fee of 15 shillings (about \$2) a year for the first four grades and 50 shillings for grade 5 through 7. In the Mwanza region, as elsewhere in the country, only 50 per cent of children of school age are in school.

This state of affairs is due in part to a deliberate policy. During the first five-year plan, because of financial constraints and the pressure to provide secondary and higher education, primary education did not expand significantly. The increase in the number of children admitted to Standard 1 rose from 160,000 in 1964 to 318,000 in 1968, but this increase only kept pace with the total number of six-year-old children. During the second Five-Year Plan for Economic and Social Development (1969-1974), the Government intends to progressively increase the number of children admitted to Standard 1, hoping to reach universal primary education by 1989.

As for secondary and university education, they will be closely controlled to suit manpower estimates of the Ministry of Economic Affairs and Development Planning. Inter-ministerial committees have been formed to ensure that pupils completing secondary school are channelled toward productive and essential work. The policy is to achieve essential self-sufficiency in manpower in all but the most skilled levels by 1980.

**International Aid.** To achieve this ambitious goal, Tanzania will continue to require large infusions of financial help, skilled manpower and teachers. So far it has done well with international



and bilateral help. The spanking new university on the hills behind the colourful capital of Dar-es-Salaam is still largely staffed by expatriate teachers. And while all primary teachers are Tanzanians, still half of the teaching force of 1,560 of the secondary schools is foreign. To speed the training of secondary school teachers in science and mathematics—two fields vital to the national economy—the United Nations Development Programme (UNDP) is helping to finance the Faculty of Science at the University of Dar-es-Salaam with Unesco as the executing agency.

This Faculty of Science is a tribute to international cooperation, as is the \$14 million university itself which has buildings financed through grants or easy loans from the United Kingdom and Scandinavia, a dome-shaped auditorium provided by the German Federal Republic, a mosque given by the Aga Khan and a building for a post office, bookshop and bank, donated by Mainland China. The science laboratory equipment comes from the UNDP which also provides the chief technical adviser and the salaries of the nine Unesco senior lecturers. Mainland China incidentally also provided a gift to the Faculty of Science—several jars of dissected animals and a stuffed Peking duck. Where else could ideology and experimentation mix more freely?

[Unesco Features, No. 573, April (II), 1970.]

#### **8. Student Science Societies Spark Individual Research (U.S.S.R.)**

"The training of engineers and technicians ought to be a dynamic process in which pure and applied science are linked organically to help meet the needs of production and modern technology. This free approach should stimulate the student to take an interest in original research, and prepare him to attempt to solve new problems by original methods."

This was the view of Nikolai Semyonov, who won the Nobel Prize for chemistry in 1956, and it is shared today by many education experts. At recent conferences, faculty members of some of the main Soviet institutions for higher education have stressed the shortcomings of a system which relies too heavily on book knowledge and formulae, much of which is soon bound to become out of date. They believe that the time devoted to lectures and compulsory practical work should be kept to a minimum, giving the student as much opportunity as possible for individual research.

These are the ideas which inspired the Student Scientific Societies (SSS) set up in most centres of higher education in the Soviet Union. The societies now have a total membership of nearly 400,000.



The Baumann engineering school in Moscow—15,000 students, 6 faculties—is a good example of what these student groups can achieve. It was in the Baumann School, sixty years ago, that Nikolai Zhukovsky, father of Russian aviation, founded the first scientific flying club, and it was here, too, that Andrei Tupolev built his first glider, forerunner of the famous series of “TU” aircraft.

**Orders for Industry.** Working through various construction sections, the student group is able to link theory directly with practice. The students carry out orders for industry, they construct prototypes and take part in the testing of machinery. In this way they come face to face with scientific problems at production level, and a two-way exchange is initiated in which the students both receive and contribute ideas, and are stimulated to undertake original work.

The various student societies form a central link in a system which starts with primary school science clubs and culminates in professional associations of research-workers, engineers and technologists.

Two of these associations—“Yunost” (Youth) in Vilnius (Lithuania), and “Fakel” (Torch) in Novosibirsk (Siberia) are now famous throughout the Soviet Union. Their structure is similar to that of the SSS and their members are young research-workers, engineers and students. “Yunost”, which earns considerable sums by carrying out orders for factories, devotes these resources to a variety of purposes: it subsidizes the publication of work by young researchers; organizes maths. and physics classes for high school graduates from remote rural areas; and has financed the building of a youth centre.

**Self-Teaching.** Vladimir Rodinov, a fifth-year student at the Moscow Technical Institute of Aviation, had this to say about the Scientific Societies: “They make it possible for us to do creative work, and at the same time represent a form of student participation.

“Progress in science and technology demands a constant renewal of methods and syllabuses. Both teachers and students have to assimilate an enormous amount of knowledge, and the effort required of the student grows greater every year. Here in the Aviation Institute we have to study for as much as ten hours a day. What’s to be done? In my view the answer lies in a new conception of the training process. The student must become in a sense his own teacher. Instead of just passively storing up data and formulae, he must learn to organise his own research and to organize it rationally, with the help of all the resources of modern technology.”



## 9. Career Prospects for New Graduates (U.S.S.R.)

Three months before their studies come to an end, students in the Soviet Union already know where they are going to work, what their job will be, and how much they will be earning.

In each centre of higher education, an appointments board is in session throughout the second term of the academic year, to allocate newly qualified specialists to jobs. The board is made up of teachers representatives from ministries, local government and industry and in some cases elected representatives of the students.

Each student appearing before the board is asked about his studies, his other interests, his family responsibilities and his health. He is asked where he would like to work. Then the board, taking into account as far as possible the wishes of the student himself, suggests a possible post among the vacancies at their disposal. The board may also suggest that a student proceed to a higher degree or scientific research, instead of being allocated to a job at this stage.

Sometimes a student's family responsibilities oblige him to ask the board to change the job proposed to him. In such cases he is sent to a post where he can be near his family.

Married graduates, whether or not they were both students in the same place, are sent to the same district. If a student marries after he has been allocated to a post, he can have his post changed if necessary so that the couple can both work in the same town.

In rare cases the board may authorize a graduate to find a job for himself. But he has to provide good reasons for wanting to live and work in a place which has not asked for the services he is specially trained to provide.

A specialist allocated to a job by the appointments board is supposed to continue in it for at least three years. This is a requirement imposed by the State, which paid for his education. Similarly, the factory or body he works for cannot dismiss him for redundancy during the three-year period, nor transfer him to a post which does not correspond to his qualifications.

Nearly six million specialists, graduates of the various centres of higher education, work in different branches of the Soviet national economy, and statistics show that even after the prescribed three years are over, most of them go on working in the place to which they were originally posted.

**How the System Work?** Every year over half a million new graduates enter the national economy, but the need for engineers, teachers, doctors, lawyers and technologists is still very great, and it is essential to share out properly the available specialists. On the one hand, places which have vacancies must be satisfied as far as



possible ; and on the other, the best possible use must be made of the hundreds of thousands of specialists themselves. It cannot be done mechanically, like filling in a cross-word puzzle.

Under Soviet law, every student who has a degree or diploma from a centre of higher education or from specialized secondary schools is guaranteed employment. But how is this guarantee made good ?

The ministries concerned draw up lists of the requirements in the various factories, organizations and institutions, and these lists are sent to Gosplan, the body responsible for carrying out the national plan. Similarly, centres of higher education inform Gosplan of the number of new specialists they will be turning out in any given period.

The needs both of the Soviet Union as a whole and of each of the Republics are taken into account. The planners try to level out disproportions between the real economic needs of the various regions and the number of trained experts they happen to produce. Thus in 1968 specialists trained in the Russian Federation were sent to work in the 14 other Republics—411 in Uzbekistan, 382 in Kazakhstan, and so on. Many young graduates from Moscow and Leningrad went to take up posts in Siberia, the far north, and the far east of the USSR.

[Unesco Features, No. 571, March (II) 1970.]

#### **10. More Pakistan Women Receive Technical Education**

A polytechnic centre for women, offering three-year courses in radio electronics, commercial education and dress designing, will open in Karachi in 1971.

There is an increasing demand for women's technical education in Pakistan, and the Government recently announced plans for 10 new vocational institutions for women. Already, Karachi University, one of the largest in the country, has about half women students, and in some years the number of girls enrolled exceeds the number of men.

According to a recent survey, over 70,000 Pakistani women are engaged in career jobs. The largest number of working women, 19,450, are employed as teachers. Over 1,000 are working in the field of transport and communications, and over 500 in banks, insurance companies, business and industry.

[Unesco Features, No. 570, March (II), 1970.]

#### **11. Poll Provides Profile of U.S. College Freshmen (1969)**

Every year for the past four years a nation-wide poll has been taken in the United States to determine the backgrounds, attitudes and opinions of college freshmen (first year).



The most complete survey of any dealing with U.S. college students, it provides a clear profile of a group of some 1,640,000 youths—most of them 18 years old—who will help set the tone of campus life in America for years to come.

It is conducted with painstaking scientific care by an organization representing some 1,500 colleges, universities and educational groups called the American Council on Education. In the latest poll, 260,000 students at 390 campuses responded.

Following are some of the highlights of the 1969 survey. :

—When asked to select objectives considered to be “essential or very important”, 82% chose “develop a philosophy of life”, 66% “help others in difficulty” and 59% “be an authority in my field”.

—Thirteen percent plan to be secondary school teachers, 11% businessmen, 9% elementary school teachers and 8% engineers. Nearly half said they intend to go to graduate school when they finish college.

—Nine out of every 10 thought the Federal Government should combat pollution. Only one in four thought the Government should move to eliminate violence in television programmes. Eighty-eight percent thought the Government should help fight crime and 78% wanted it to help eliminate poverty.

—Nine out of 10 thought students should design their own curriculums, and 68% thought students should evaluate faculty members.

—Seventy-six percent thought abortions should be legalized, and 47% wanted divorce laws liberalized.

—Eighty-nine percent had attended a church service during the previous year.

—Fifty-four percent favoured abolishing capital punishment.

—Fifty-eight percent read poetry for personal enjoyment.

—Thirty percent called themselves “liberal” and 21% “conservative”. Forty-four percent said they were in between or “middle of the road”. Interestingly, 15% of the latter thought four years of college would change their political orientations, 9% to the right, 6% to the left.

Among questions that were asked the year before, there were marked increases in the percentages of students agreeing that “marijuana should be legalized” (up from 19 to 26%); that “only volunteers should serve in the armed forces” (up from 37 to 53%) and that “most college officials have been too lax on student protest” (up from 55 to 60 percent).



Answers to questions about background revealed these facts about the students : few of their parents graduated from college ; seven out of every 10 grew up in a metropolitan area ; 30 percent of their fathers were businessmen ; and half go to a college within commuting distance of their homes.

Fifty-seven percent of the freshmen are men, the same percentage as the year before. Six percent are Negro, one percent are foreign.

Male and female students agreed on most questions of attitudes and opinions, but on a few, significant differences appeared. Six out of 10 women, for example, thought the Government should control firearms ; only four out of 10 men did. Far more men than women thought the army should be voluntary, that the major benefit of college is monetary, that courts overprotect the criminal, and that divorce laws should be liberalized.

On the other hand, significantly more women than men thought capital punishment should be abolished and violence eliminated from television programmes.

[Unesco Features, No. 570, March (I), 1970.]

## **12. Bilingual Education for U.S. Children**

This school year, 76 school districts in 12 States throughout the USA have started teaching in a second language as part of a new national programme of bilingual education.

Initially, the programme will meet the needs of some 25,000 children and teenagers who are limited in school because they come from families where English is rarely spoken. Sixty-seven of the bilingual projects apply primarily to Mexican-American children whose mother-tongue is Spanish. Five are concerned with Cherokee and other American Indian languages, two with Chinese, two with Portuguese and one each with French and Japanese.

In some schools, students may receive as much as 75% of their instruction in their mother-tongue, with teaching in English being stepped up as they become more proficient in the language. Mothers of participating children in some districts are being hired as teacher aides.

A student's study of the history and culture associated with his native language is also considered essential to the programme ; in one school in Utah, for instance, instruction in the history and culture of the Navajo Indians has been added to the curriculum.

Federal funds totalling \$7.5 million are being provided to support the 1969-1970 programme.

[Unesco Features, December (I/II), 1969.]



### 13. A New Teaching Device for Soviet Schools : The Car

Since the beginning of the current school year, a new subject—the motor car—has been taught to the senior classes of some Soviet schools. The pupils learn to drive cars (or tractors and combine-harvestors in rural areas), and study their mechanics, maintenance and repair.

[Unesco Features, No. 563, November (II), 1969.]

### 14. Primary School Mathematics : A Soviet Experiment

It seems likely that in the not too distant future job application forms will include, along with the traditional questions about schooling and professional qualifications, an extra question on the ability of the applicant to use a computer. In any case, the next generation—the children at school today—will certainly be required to have a fairly advanced knowledge of mathematics, for mathematical methods are increasingly permeating the various branches of learning—medicine, biology, economics and linguistics.

This growing demand for mathematics in all fields of human activity creates problems at the educational level, and in the Soviet Union groups of scholars, psychologists and doctors have been studying the question. The result is a new syllabus, in particular a new mathematics programme, which instead of overloading children's memories by making them learn rules and theorems by heart, aims to develop their powers of reasoning and abstract thought, so that they can learn to solve the problems set in class.

**Unsuspected Potential.** Research on the potential of the human brain has led scientists to the conclusion that children between 7 and 10 years old are capable of assimilating concepts previously considered far too complex or abstract for this age group. Today, children in Soviet primary schools learn how to use algebraic symbols and work out on the blackboard simple propositions of the form ; if  $A+B=C$ , and  $B+A=C$  ; then  $A+B=B+A$ . In other words, a seven-year-old is perfectly capable of understanding notation by letters and using them in elementary algebra.

Up to now, educators based their syllabuses on the theory that, in all branches of knowledge, the understanding of principles and general laws must always be preceded by the acquisition and correlation of the largest possible quantity of facts and data. Thus in primary mathematics courses, the teaching of general laws did not begin until the fifth grade, in other words right at the end of the elementary cycle. It is still true, of course, that the learning process works from the particular to the general, from facts to theory, and from the concrete to the abstract. But the Soviet educators' research has shown that, since the children are learning under the guidance of adults, it is perfectly feasible to reverse the process and proceed from general principles to particular concepts.



This is why it was decided to introduce children to algebra in their first year of primary school, give concrete form in arithmetic classes to the abstract notions acquired, and give more instruction in geometry. In this way, children of 7 to 10 years are enabled to develop the theoretical thought necessary for a more effective and rapid assimilation of the syllabus.

Under the direction of Professors L. Zhukov, V. Davydov and D. Elkonin, a teaching programme based on the new methods was used experimentally with several thousand primary classes. Since the beginning of the new school year all primary schools in Moscow have been teaching the new syllabus, and the methods are to be extended shortly to the entire Soviet school system. The new mathematics programme, original both by its content and its scope, is also being taught over three years instead of the four previously taken for this kind of teaching.

[Unesco Features, No. 563, November (II), 1969.] \* \*

### **15. More Women at British Universities**

The proportion of women full-time students at British Universities is rising steadily, according to figures released recently by the UK Department of Education and Science. Of 200,121 full-time students in 1967-68, 54,844 were women, a proportion of 27.4%—“thus continuing a small, but steady, upward trend,” according to the Department.

The number of first class degrees obtained by women was 14% higher than in 1966-67, but the increase was not evenly distributed. There was a rise of only 5% in science degrees, compared with 19% in engineering and technology and 18% in social administrative and business studies.

[Unesco Features, No. 561, October (II), 1969].

### **16. International Games for the Disabled**

Two hundred and seventy-five physically handicapped sportsmen from eight European countries competed at the International Games for the Disabled, held at Kerpape, Brittany, at the end of September. Events ranged from fencing to javelin throwing, from archery and shooting to table tennis, from bowling to basketball and swimming.

The idea of the international contests for the disabled was first put forward in England 21 years ago by Dr. Ludwig Guttmann, Director of the National Spinal Injuries Centre at Stoke Mandeville, Buckinghamshire. Teams from many countries have regularly competed at the Stoke Mandeville Games since 1948.

Sir Ludwig (he has recently been knighted) attended the Kerpape Games as President of the International Federation of



Sports for the Disabled. He stressed that sport plays an important part in the social rehabilitation of the disabled, both young and old, by stimulating the mental faculties and restoring self-confidence.

The World Championship for the Disabled is to be held in July 1970 at Saint-Etienne, in central France, and Olympics for the Disabled will be held in Munich following the 1972 Olympiad.

[Unesco Features, September (II)/October (I), 1969.]

### 17. "Instant" Laboratories for Asian Schools

How can you produce an "instant", movable, light and inexpensive school laboratory, which is nevertheless perfectly efficient and fully operational?

This was an important problem tackled—and now successfully solved—by the Unesco-sponsored Asian Regional Institute for School Building Research at Colombo, Ceylon. A pilot project using such a newly designed type of laboratory has been going on for a year at the Homagama Secondary School, a few miles outside Colombo, where it is being tested by a class of 30 students.

The success of this project could have far-reaching effects on science teaching—especially chemistry teaching—in Asian secondary schools. It could thus help to meet the growing pleas from ministries of education (and not only in Asia) for more science teaching in schools as essential groundwork for countries' economic and social development.

**Design for Group Work.** The project also fits in with the "new" teaching of science—again chiefly chemistry—which is appearing in Asia, as well as most other parts of the world, according to which laboratory experiments are devised as far as possible by the students themselves, guided by the teacher who often assumes the role of co-worker. The new project, furthermore, does away with traditional laboratories designed for a very specific teaching method—that of teacher demonstration followed by repetition of the demonstrated experiment by every pupil. Even the furniture reflected this traditional teaching method with the raised demonstration platform and large, heavy, high student benches, formally lined up to face the teacher, which encouraged individual rather than group work.

These new laboratories, built in self-contained units for five students each, are "instant" because they can be quickly assembled in one classroom, dismantled and reassembled, if necessary, in another. They are movable because they do not depend on built-in plumbing such as waste pipes, water pipes, gas pipes and electric wiring. They are light because they are made of plastic and wood. They are inexpensive because they cost about a third less than the solid, old school labs, where main fixtures for water, gas and electricity often took up nearly half the total cost. In addition, it has been found that in



these new labs only one cubic foot of timber is needed per student, compared with 3 to 5 cubic feet in the traditional establishments.

As about 80% of Asian schools are in rural areas, these advantages not only lend themselves to new teaching needs, but remove one of the main difficulties in extending science education—the capital cost of providing the necessary equipment.

The laboratories are the brain child of Mr. D.J. Vickery, a British research architect who is senior Unesco expert at the Regional Institute, and Mr. Jinapala Alles, a Ceylonese, who has developed a reformed science curriculum for secondary schools in his country.

**Saving Water.** Each unit consists of a hexagonal wooden bench, allowing room for five students to work in a group, with a portable plastic sink attached to the sixth side. Usually these benches are linked in pairs with the sink serving as a hyphen between them. The radius of the bench is tailored to the arm reach of students and the height has been lowered to make sitting possible and tasks such as reading a burette easy without climbing on unstable stools.

Water for experiments is supplied in plastic, 3-litre, bottles. When conceiving the project, it was calculated that the amount of water used for all necessary experiments—95 carried out by students. 75 demonstrated by teachers, and 29 mixed, in one school year—could be cut down to 16 litres per term, per group of five students. This is half, a third, or even less than what is used and often squandered away in traditional school laboratories. With such a small amount of water used, only a small amount of waste results, so neither piped supplies nor drainage is needed. The waste is collected in the portable, plastic sinks, which can be lifted out and emptied after every lesson. Such a saving of water is important in many places, especially rural areas where it may be in short supply.

Heat is provided by self-contained spirit lamps, often using solid fuel for compactness, and kerosene burners. Electric power, needed for electrolysis and kindred experiments, is provided by motor-car batteries.

During the pilot project several adjustments have been made both to the benches and to the equipment to improve practical efficiency. Now the experts are satisfied that the new furniture and simplified equipment meet with the original aims: namely to enable the new methods of chemistry teaching to be introduced more easily, with greater participation by the students, and at less expense.

So far, three other Asian countries—Malaysia, Philippines and Thailand—have been in touch with the Regional Institute with



a view to installing similar laboratories in some of their secondary schools.

[Unesco Features, No. 549, April (II) 1969.]

### 18. Student Riots in 56 Countries

During the academic year of 1967-68, there were student riots and disturbances in 56 out of the 80 of Unesco's member countries which have universities. (The other 45 Member States do not as yet have universities.)

(Unesco Features, No. 549, April 1969.)

### 19. More Mixed Schools—A Definite World Trend

More girls are sharing classrooms with boys, at all levels, in a growing number of co-educational schools all round the world.

Twenty-seven out of 105 countries which replied to a recent Unesco questionnaire reported they now have a complete co-educational system, with few exceptions, and the majority of other countries said they have mostly mixed establishments at different levels. In addition, 14 more countries said they were considering the introduction or development of co-education.

Completely, and legally, separated education exists in only two of the countries replying—both Arab lands. One notable exception to this traditional separation of boys and girls at schools in the Arab world is Tunisia, which last year announced plans for the complete co-education of their schools at all levels. On the other hand, Morocco, together with the Republic of Vietnam, said they were contemplating discontinuing co-education and re-introducing separate classes in some cases.

The highest percentages of fully mixed classes are found, in descending order: in the USSR, 100%; all Europe, 35%, with the countries of Eastern Europe leading the field; South America, 33%; North America, 28%; Oceania, 25%; Asia, 12%; and lastly, Africa, 7%.

**Why Co-education is Favoured?** Findings in this report also go into the motivation for the introduction of co-education. True co-education is introduced initially much more often as a result of particular circumstances than because of any clearly defined principle. For example, in rural areas, where the school age population is scattered, co-education enables savings to be made in funds, school buildings and materials, and also helps to alleviate possible shortages of teaching staff, who are more difficult to recruit in rural areas than in towns and cities.

Minimizing costs, though important, is only one motivation. Many countries have accepted co-education in principle as the only



possible system in modern education adapted to today's world in which women play an increasing role in social and professional life. In almost all traditional societies, women were mainly concerned with household chores, bringing babies into the world, looking after children and related activities which kept them close to home; men's activities, on the other hand, were more generally focussed on the outside world, on civic and professional life. However, an ever increasing number of women are now engaged in regular and "non-domestic" occupations, and in the professions. The distribution of activities purely by sex is steadily diminishing. Countries which have become aware of these profound changes indicate that they consider the development of co-education as an effective starting point to adopting, or adapting to, new standards of behaviour for both sexes and so facilitating their integration into modern society.

[Unesco Features, No. 546/547, March (I/II), 1969.]

## 20. \$10 Million Scheme to Improve Schooling in Guyana

Guyana's education system below the secondary level is to be re-organized and strengthened through a major project to cost \$10 million. Rather more than half this sum—\$5.8 million—is being provided by the World Bank and the International Development Association in the form of a loan and an interest-free credit.

Under the project, which was prepared with the assistance of Unesco specialists, a primary teacher training college with a capacity for 660 students will be built and equipped. The new college, together with in-service training, will enable the proportion of trained primary teacher to be raised from less than 40% to more than 60% by 1975.

A new system of secondary education will also be introduced to remedy the acute shortage of professional, technical, skilled and semi-skilled workers. It will provide students with a common basis of general studies and then screen them according to aptitude and interest for further schooling in curriculum streams such as humanities, science, agriculture and commerce.

[Unesco Features, No. 546/547, March (I/II), 1969.]

## 21. 400 German Schools have Language Labs.

So far, 400 secondary schools in Federal German have been equipped with language laboratories. By the end of 1970, 20% of German schools will have them.

[Unesco Features, March (I/II), 1969.]

## 22. "Schools for Life" Campaign in Sweden

"Operation Well-Being and Enjoyment," sparked-off last autumn by Sweden's National Board of Education, aims to solve



some of the more troublesome class-room problems in Swedish schools.

Contradicting the traditional belief that bad discipline in schools is merely the pupils' fault, Hans Lowbeer, the Director General of the Board, frankly admitted that there are causes on both sides of the master's desk: "Bad teaching methods and unsuitable teachers are just as often to blame."

**Pupils on School Council.** Some new ideas, designed to promote a better atmosphere in the class-room, are to be introduced shortly in an all-out effort to overcome disciplinary problems. Teachers, parents, janitors, administrative personnel and pupils are all to be represented on a "School Co-operative Council," which will be able to call on a service group of professional consultants (educationalists, psychologists and sociologists operating independently from school authorities), to investigate disciplinary difficulties and recommend counter-measures.

"School hostesses" have been introduced to receive visitors and help pupils on personal matters. When necessary, they can replace absent teachers by conducting "pre-fabricated courses" with audio-visual aids. In this way, it is hoped to overcome some of the disciplinary troubles in the wake of short-time deputies called in from outside and often unable to cope with "strange" classes.

An instructive folder on "How to improve the school milieu," based on research in some experimental schools, recommends closer co-operation with the pupils, inviting them to take part in setting up instruction routine and to comment on their school books.

The change from the selective to the elective school system offering each pupil a choice to enable him to shape his studies according to his abilities and interests, has resulted (not unexpectedly) in a series of difficulties.

Spurred by the undue ambitions of their parents, too many youngsters have picked the theoretical sector of the continuation schools after their obligatory nine-year comprehensive training. In some cases as many as 83% of the ninth (and last) grade opted for the 'Gymnasium'. Only a few decided for vocational training and fewer still were prepared to start working as apprentices. This resulted in bottle-necks at nearly continuation schools, and many disappointments. More attention will be devoted in future to all sorts of practical training to stimulate interest in the wide range of careers available.

**Boys Learn Cooking and Ironing.** The watchword is: "Schools for Life". All pupils, boys and girls, should be equally prepared to face the demands of every day life. No helpless bachelors or grass-widows in future! Cooking, baking, dish-washing, ironing and



handling vacuum-cleaners and laundering machines are on the regular curriculum for all boys and girls for 3 hours weekly throughout the 7th grade (13-14 years). Girls learn to change electric fuses and repair household gadgets. Every school has a "model home" where the youngsters learn to choose and handle furniture, mats and bed-clothes, to match colours and pick the right materials and decorations.

The schools' metal and carpentry workshops attract more and more girls, who are increasingly interested by careers in the engineering and building trade. Many boys attend "textile courses" to learn sewing and mending. In motor workshops they repair their own bicycles, dismantle and assemble car engines, mend radio sets and electrical equipment.

Twice yearly in the two last grades of the comprehensive school, pupils are offered a choice of some 40 different possibilities for preparatory vocational training and spend two-week periods as apprentices in workshops, factories, offices, shops, theatres, film studios, etc.

Some novel forms of pre-vocational training have been pioneered by Mariekall School in Södertälje, near Stockholm. Arithmetic is taught in fully equipped grocery and hardware stores in the school's own "shopping street". On "shopping rounds" they learn to buy and sell, to handle cash registers and scales, to keep accounts and incidentally—by checking the regular prices—also appreciate their mother's housekeeping budget. Dummies and samples in the shops are picked and priced by the Swedish Retail Association, whose aim is to make the "customers and salesmen of to-morrow quality, price and design-conscious".

The school's Post Office handles mail like a regular G.P.O. branch and is staffed at certain hours by pupils of the upper grade (15-16 years) who learn all regular transactions at the parcel, money, savings-bank and registered mail counters. Their class-mates, and junior pupils, as well, get instruction on how to address letters, write money orders and read the telephone directory.

The main object of these practical aids is to promote self-assurance, efficiency and a better appreciation for the human problems on both sides of the counter. And the experiment adds an extra dimension to schooling which most pupils who have experienced it would be sorry to lose.

[Unesco Features, No. 544, February (I), 1969.]

### 23. UN Projects in Zambia Ease Teacher Crisis

To help overcome a chronic shortage of teachers in Zambia where the number of secondary school children has tripled in four years, two projects, assisted by the UN Development Programme



and Unesco, are accelerating teacher-training at the University of Zambia in Lusaka. One project is directly concerned with pre-service and in-service training for secondary school teachers.

In its drive to train more teachers, the Zambian Government is insisting that a percentage of all university students must qualify as teachers. Ultimately, the University of Zambia is expected to have an annual output of more than 300 trained teachers.

Copper-rich Zambia has a total population of 4 million. From a 1963 level of only 7,000, the number of secondary school pupils rose to 34,000 by 1967, and by 1970, the number of students at the University of Zambia is expected to have increased four-fold.

To quicken the output of graduates, the University has organized correspondence courses to enable qualified students to obtain degrees without attending the university full-time. Courses for this 'mail-order education' are exactly the same as for full-time students, except that they are phased over six years instead of four.

[Unesco Features, February (I), 1969.]

#### **24. U.S. Experiments with Classrooms on Wheels**

Isolated rural schools in the United States have many students who spend up to 40 hours a month riding a bus to and from classes. Now some rural schools in two States, Pennsylvania and Colorado, are experimenting with "audiobuses" to make profitable use of the time usually lost on long bus trips.

What these school officials have done is to make each school bus a classroom on wheels by installing stereo sound systems, with ear-phones for each student. Each headset comes with its own volume and channel selector controls. Interested students may select from a number of tapes. They are consulted on their preferences and tested to check the effectiveness of the programme.

The taped programme in the Pennsylvania experiment are primarily concerned with fine arts and social studies. One channel usually carries a tape, "Great Moments in History", a series of dramatizations of important events in America's past. Other channels carry "Great Moments in Music" in which a famous symphony might be analyzed and performed. Well-known entertainers have recorded readings on the "Great Moments in Literature" tape. Each of the Pennsylvania buses carries five tape players, and each device carries a 15-minute educational programme.

The audiobuses used in Colorado are more elaborate. Programmes, both group and individualized, are classified under five topics—English, social studies, science, recreation, and fine art. Students may choose materials on these topics prepared for their own age level.



Taped programmes runs from 3 to 58 minutes. Some of the programmes are educational travel guides to the area the bus passes through and include information about the economy, geological formations, plant life and climate. Other programmes include famous plays, readings, poems, music and Spanish-language instruction.

"We intend that the programme will be highly motivating and demand student curiosity and interest," says LeRoy Hipkins, superintendent of the rural Colorado school system using the audiobus. He expects the audiobus to become a permanent addition to the school system and plans already are under way to broaden the number of taped programmes to include subjects of local interest such as hunting, mountaineering, driving and home safety.

From the number of inquiries directed to the Colorado and Pennsylvania schools, officials think the audiobus idea may have national and possibly international appeal. The problem of wasted hours on a school bus is not unique to the United States.

[Unesco Features, No. 542/543, January (I/II) 1969.]

## **25. World Bank Loan for Better Schools in Trinidad**

Sixteen junior secondary schools, three senior comprehensive schools and a teacher training college are to be built and equipped in Trinidad and Tobago under a \$18 million project prepared by the Government with Unesco assistance. Half of the cost is being met by a 25-year loan from the World Bank.

The project constitutes the first stage of a long-term plan to reorganize the country's educational structure. Under the present system, primary education is well developed, with an enrolment of about 95% of the 5-11 years' age group. But there are insufficient secondary schools, and under the plan the present post-primary school system will be progressively replaced by junior secondary schools with improved academic standards. To increase the supply of skilled manpower, the programme of senior secondary education will be made more comprehensive, with options in agriculture, commercial subjects, home economics and technological courses.

[Unesco Features, No. 542/543, January (I/II) 1969.]

## **26. Guatemala to Expand Secondary School Education**

Guatemala is to invest \$12.6 million in improvement and expansion of its secondary school system. The programme will train secondary school teachers, agricultural technicians, and personnel for industry and business. At present, there are about 60,000 secondary school children in the country. The target for 1980 is 115,000.

A \$6.3 million World Bank loan will help to construct and equip a secondary teacher training school at the national University



of San Carlos in Guatemala City, 15 new general secondary schools throughout the nation, and an extension of the Technical Institute of Agriculture at Villa Nueva. Unesco experts aided the Guatemalan authorities in preparing the project.

[Unesco Features, No. 542/543, January (I/II), 1969.]

## 27. **School Children's "Outings" Help Grow More Food in Ceylon**

The campaign is a massive drive to produce more rice, the staple food of the people, and other important foods such as potatoes, onions and chillies. Increased production will enable the country to divert valuable foreign exchange from food imports to the purchase of essential goods which cannot be produced locally, and to import machinery and equipment necessary for industrial development.

The school children's contribution has been most significant in the field of rice production. Until recently, most rice farmers on small holdings were cheated of the maximum benefit from the Government-subsidized fertilizer by a heavy growth of weeds on the paddy. For most of the year, the cultivators' own families provide sufficient labour in the fields. But there are times, especially when the rice is about one month old, when additional labour is needed to ensure a full harvest later on. This is where the school children come in: their help in weeding at the critical period has increased yields by an average of 25% in a large acreage of paddy fields.

Under a Schools' Paddy-Weeding Programme launched by the Government, school children over the age of 12 engage in weeding for five days during the cultivating season, working for about three hours a day, usually in the morning when it is not too hot. Both children and teachers treat the weeding as an "outing", and they enjoy working in the fields as a change from the usual routine of the class-room.

During the cultivating season (September 1967 to July 1968), school children weeded 32,600 acres of paddy. They also planted a total of 9,000 acres of plots of land round their schools with vegetables, and helped set up 755,800 home gardens.

[Unesco Features, No. 541, December (II) 1968.]

## 28. **A U.S. University Makes Way for the Generalist**

Up to 20 undergraduate students at Stanford University in California are being allowed to tailor their own academic programmes, cutting across all normal departmental lines. Their individual, self-designed curriculums are subject to faculty approval. They also must meet Stanford's general studies and residence requirements.



The novel programme was instituted largely in response to recommendations made in 1967 by a special committee studying undergraduate education at the University. But two students were also instrumental in the adoption of the programme. They are Marilyn Hezmall and Ying Lew, two California undergraduates who wanted an interdisciplinary education but were frustrated in getting it because of the university's academic departmentalization.

Miss Hezmall's goal was to go beyond the confines of her subject major, French, to study the whole field of language and its possibilities—"the physiological, psychological and physical processes leading to sound".

With the help of a professor of English, Miss Hezmall devised a curriculum that included courses in linguistics, French, anthropology, speech science and speech pathology, mathematics, music, religion and physics. Her pressure helped persuade the dean and other faculty members to approve not only her request but the special committee's proposal that qualified students be given more academic latitude.

Mr. Lew's request was also a strong influence. With no faculty guidance, he worked out a four-year programme in computer science, mathematics, electrical engineering, philosophy and physics, since the University offered no degree in what he was most intent on learning: computer science.

Now Mr. Lew and Miss Hezmall are two of the 20 students in Stanford's experimental interdisciplinary programme. The deans ruled that the 20 students in the programme draw up interdepartmental curriculums in consultation with at least three professors in the departments involved. When approved by the deans, the programme would be supervised by the same three professors.

Academic emphasis in American Universities has been for many decades in the direction of the specialist and the new professional. This emphasis has been a source of student discontent because many students are increasingly concerned with a broader view of society and want to be generalists rather than specialists. Stanford's programme, therefore, could well be the prototype of an important new development in U.S. higher education.

[Unesco Features, No. 533/534, August (II)/September (I), 1968.]

## **29. U.S. to Use Television to Teach Pre-Schoolers**

A recent study showed that many three to five-year-old children in the United States watch about 55 hours of television programme every week. Other studies have revealed that the most important learning in life takes place in infancy and early childhood—before formal schooling usually begins.



In an unprecedented and potentially extremely significant move, the Federal Government and several private groups in the United States have decided to capitalize on these two findings and use television for educating pre-school children throughout the country.

Some 150 non-commercial television stations will broadcast hour-long colour educational programmes every week-day morning and afternoon for 26 weeks. Some commercial stations may also broadcast the special programmes.

The programme will be lively and entertaining to compete with programmes offered simultaneously on commercial television stations. Proposed programming suggestions for the series include the following: numbers and letters of the alphabet might be offered through animation built around captivating jingles; story-reading of children's classics with the characters coming alive through animation; games might be played to identify familiar objects and explain how they are used and why; cartoon films might be temporarily stopped and youngsters asked to identify what they see.

Each programme will be taped and then shown to small groups of children. Its effects on the children will be determined, and revision, if needed, will follow. Finally the programme will be released for nation-wide showing.

The new series of programmes is expected to cost no more than \$8 million. The money will come primarily from the U.S. Government and two philanthropic foundations—Ford and Carnegie. One of the main benefits of the series, its founders predict, will be that it will give children from poor families an educational head start they otherwise would not have. Thus, children from slum areas might be able to start school on the same intellectual plane as children from middle-class homes.

[Unesco Features, No. 527/528, May (II)/June (I), 1968.]

### 30. Iran's Schools Under Canvas

Throughout Central Asia there are various nomadic tribal groups of diverse origin, who with their flocks of sheep, goats and camels, dwell in the cooler mountain areas in the summer and migrate to the warmer regions in the winter. In Iran the culture and civilization throughout the centuries has been closely bound up with these pastoral people. Although during the past fifty years a good number have settled in towns and villages, there are still many nomadic tribes who continue to live in the traditional way. According to the 1966 census, there are 650,000 nomads—men, women and children—chiefly in the provincial areas of Kurdistan, Azerbaijan, Baluchistan, Khuzistan and Fars.



**The White Tents.** In an effort to improve the general welfare of these people and to prepare them for the social changes inevitable if and when they do become settled, an unusual system of education was introduced ten years ago in Fars Province. Initially a voluntary movement, started through the inspiring leadership of a son of a tribal Khan, Mr. Bahman Begui, schools were established in *white* tents, as distinct from the *black* tents in which the tribal people live. As the tribal unit moves to fresh pastures, so the "school" packs up and moves also. Today the scheme is an integral part of the national system of education in Iran, receiving full support from the Government.

Each school has an average of 30 pupils—boy and girls—and represents a multi-class unit. The school equipment apart from the white tent, consists of a blackboard and chalk, a folding chair, a map of the world and school text-books. The children sit on rugs on the ground. There are over 600 schools at present, providing primary education for 24,000 children.

The teachers themselves are tribal men and women, who, after completing one or two years of secondary education in Shiraz, the main city of the province, are selected according to their aptitude and tribal needs and given a special teacher training course before rejoining their tribes. A modern residential training centre has been established in Shiraz, providing excellent accommodation and teaching facilities for 100 men and 30 women. Practical training courses are provided, suited to the special needs and circumstances of the schools. From time to time a group of tribal children and their teacher is brought to the centre and, in a white tent erected on the campus, a model school is conducted for student observation.

Visiting some of these schools was a unique experience. Apart from travelling across rugged, roadless areas, the problem was to find the school. A white dot in the distance was the first indication. In one instance the school had moved during the previous week, and the supervisor who accompanied me was faced with the question—where? However, local knowledge enabled us ultimately to find the school. The attitude of the children and their keenness towards their school work reflected the happy relations between teachers, pupils and parents. The children were eager to demonstrate their accomplishments in reading, writing, arithmetic and social studies. Singing and simple drama were recognized activities and a spirit of enquiry was evident though the question they asked of the visitor: Where did he come from?—Which country?—What was the country like?

The daily school hours are long, the morning session being 7.30 A.M. to 11.30 A.M. and the afternoons 2 P.M. to 6 P.M. but the conditions of freedom without licence—any form of corporal punishment is strictly forbidden—enable the children to pursue their work without fatigue, and the levels of achievement in the basic skills are distinctly good.



Upon arrival at one school at 6.15 P.M., we found the lessons had finished for the day, but the children came running to their white tent with their books, anxious to meet the supervisor. Within a few minutes the school was in operation, with their parents closely following the proceedings. My thoughts turned to other circumstances and what the situation would be if an "Inspector" arrived at a school 15 minutes after closing time !

**Parents' Interest.** A further feature of the system has been the close association of the parents with the school. On the occasion of our visits the parents invariably came and watched with interest. As a result, a measure of literacy has been developed among the older members of the tribal units and it is proposed to extend this by establishing a mobile library which will be supported by Unicef.

The white tent schools have now had time to prove their worth. Their success is undoubtedly due to the leadership of their Director, Mr. Bahman Begui and his team of supervisors—all of them ex-tribal teachers. They are likely to see their hard work rewarded shortly in the extension of the system during the forthcoming Five Year Plan to other tribal groups in Iran.

[Unesco Features, No. 527/528, May (II)/June(I) 1968.]

### 31. **Sweden Increases Aid for Education in Africa**

A sum of \$1,347,000 has been presented to Unesco by the Swedish Government to finance various activities connected with the expansion of education in Africa, and particularly to further the education of girls.

This donation, which will be used to build and equip a secondary school for girls in Sfax, Tunisia, was paid into the Swedish Funds in Trust Programme for education in Africa. It brings to over \$5 million the total that Sweden has made in contribution to this programme since 1963.

Previous projects financed under the programme have included : a primary teacher training college for girls in Sierra Leone ; a secondary school for girls in Tanzania; three Book mobiles for use in Kenya, Tanzania and Uganda; a primary teacher training college for men and women in Botswana; science teaching equipment for secondary and advanced levels in eight schools in Ghana; scholarships for 130 girls to attend secondary schools in Ghana; and fellowships for more than 120 African women to attend courses in functional literacy training in Israel.

The new secondary school to be built at Sfax will accommodate 2,500 girls, 1,080 of them as boarders. It is expected to be completed in two years.

[Unesco Features, June (II), 1968.]



### **32. Experiments in Programmed Learning in Germany**

An experiment in programmed learning involving more than 5,000 pupils in 160 primary, secondary and technical classes, is being carried out in 13 schools in Rhineland-Westphalia, Federal Germany. To test the efficacy of the new methods, the same programme is being taught in parallel classes by classical teaching methods. The results of the project are being analysed by educational experts and psychologists and will be used as the basis for further experiments in programmed learning.

[Unesco Features, June (II), 1968.]

### **33. TV School in Rio**

Television is helping young Brazilians who have failed to complete their education. A regular series of programme under the general title of "Universidade de Cultura Popular" being broadcast over one of the commercial stations prepares students who have left primary school to take the normal school-leaving examination. Subjects taught include mathematics, science, history, geography and Portuguese. The programmes are being produced free of charge by teachers in their spare time.

[Unesco Features, June (IF), 1968.]

### **34. Rural Schools and Economic Development in Cameroon —Experimental Project**

A five-year experimental project to adapt primary education to the needs and conditions of a mainly agricultural population has been launched by the Republic of Cameroon with aid from the United Nations Development Programme (UNDP) and Unesco. Centred on the rurally oriented Teacher Training Institute in Yaounde, the five million dollar project is being financed jointly by the UNDP (Special Fund Component) (\$1,701,300) and the Government of Cameroon (\$3,572,000). A further contribution of some \$175,000 will be provided by Unicef in the form of equipment, while technical advice and assistance are being furnished by Unesco, which is acting as executing agency for the project.

This is the first time that the UNDP had agreed to aid a project concerned with primary education in a newly independent country; hitherto it has always confined its support to projects involving secondary, technical or higher education. It is doing so in this project because it will make a meaningful contribution to the country's economic and social development.

What makes the Cameroon project different from all, or most, others concerned with primary teacher training in developing countries, is that it involves a special, rurally oriented training for practising teachers, and a similar training for new student teachers.



The institute, which opened in November 1967, offers in-service training courses, specifically geared to local and national conditions and practical needs, for Cameroon's existing and—for the most part—unqualified primary teachers as well as for school inspectors, some headmasters and teacher instructors; and it also provides the same specialized training for new teachers during their normal three-year course.

Well before the introduction of the current five-year development plan (1966-1971), during a period which saw the number of children in primary schools leap from 350,000 at the time of independence in 1960, to 609,000 in 1966, the Government of Cameroon had already decided that the greatest attention should be given to the creation of a sound, practical and useful primary education system, based on the country's needs and future potential—in fact the "Cameroonization" of education.

As Cameroon, like most of the young States in Africa, is still essentially a rural and farming country, it was decided that emphasis should be placed on education which would better equip a child for life in an agricultural area and help him get to know and appreciate the land and the benefits to be obtained from it.

However, the government was aware of two possible dangers. Firstly, the country might be split between two systems of education—one rural and the other urban—with the towns attracting and producing technicians and administrators, and the rural schools turning out a sort of "second class" citizen, in turn taught, administered and generally directed by the town educated people. The other danger was of prejudicing Cameroon's future by more or less condemning it to remain bound to an agricultural economy in an age when some degree of industrialization is essential for balanced and integrated national development.

The solution, it was judged, should be a form of primary education suited to both urban and rural needs and conditions, but based essentially on the country's natural background. And as Cameroon still remains predominantly agricultural and pastoral, stress was laid on the improvement of rural education and on its more practical aspects.

"Education has been regarded for some years now as a third factor in all national development", said Mr. Jean Becquelin, chief Unesco technical adviser in Yaounde. "Capital, labour and education are, together, essential for increasing the gross national product and the potential of any developing country. Here, in Cameroon, it was realized that the established system of primary education was not preparing young people adequately for their future role: work on the land, in this basically agricultural country. There was a gap between the aims of what was being taught in primary schools and the objectives of rural development. This was the main reason



why the UNDP agreed to support this project for the training of a new and special kind of teacher, who is capable of putting new methods into practice in rural schools, and also act as a link, as it were, for the promotion of local development plans for the community."

The institute at Yaounde has at present 70 student teachers now in the first year of their three-year course. All must sign an agreement to serve as teachers for at least ten years after their graduation. There are also 210 practising teachers, unqualified and untrained, enrolled for refresher and in-service training courses varying from three to nine weeks in duration, and help in vacations. In addition, these teachers follow up their training with correspondence courses also aimed at improving their professional ability and knowledge, and with regular pedagogical seminars. Next year, enrolment is expected to be 140 and 350 respectively, with an eventual regular intake of 210 and 400 students in the two categories from the third year of the project onwards.

These refresher and in-service courses are, at the moment, primarily aimed at improving the qualifications and ability of some 8,700 auxiliary monitor teachers, who make up at least three quarters of the country's teaching personnel, and who have had no teacher training whatsoever. Of Cameroon's total of 11,600 primary teachers, only 138, or 1.2% are qualified at *baccalaureat* level. The rest are monitors or assistant teachers with minor diplomas or certificates.

Thanks to the new institute, it is hoped eventually to provide all these auxiliary monitors with training through refresher and in-service courses, and to raise the professional standard of all other junior teachers. In addition, the institute aims to turn out another 3,500 new and qualified teachers by the end of the present five-year plan, thus bringing up the country's total number of primary teachers to 18,500.

Besides the usual classroom subjects, instruction at the institute includes studies in pedagogy, theoretical, psychological and practical aspects of education and general school administration, as well as training in agriculture, husbandry, traditional handicrafts, and domestic science and home economics for girl pupils. Practical, on-the-spot instruction in agriculture and husbandry is given by experts on small plots of land set aside for this purpose near the institute. Facilities are also available for teaching the basic elements of carpentry and masonry. Emphasis, in all subjects taught, is always on practical applications.

At the end of their three-year course, 10% of the newly graduated teachers can be admitted for further studies at the country's secondary teacher training college, also in Yaounde. But again



they must sign an engagement to teach in Cameroon for at least ten years.

A third function of the institute is to carry out educational research and organize studies in the reform of educational programmes and curricula, as well as to produce new systems and methods of teaching involving audio-visual techniques. All these new materials and the up-to-date teaching methods and techniques are being tried out, tested, and adapted where necessary, both in classes for the student teachers and in the refresher and in-service training courses.

(Adapted from Unesco Chronicle, April, 1968, Vol. XIV No. 4,

### 35. **University Evening Classes Gaining Popularity in Sweden**

More than 2,000 Swedes, ranging from 21 to 63 years old, are now taking evening classes at the universities of Stockholm, Uppsala, Malmo-Lund and Gothenburg under a scheme of academic studies for adults. Approximately one-third of the students are engineers taking economic and law courses. Women, who make up a quarter of the students, prefer English, Spanish, psychology and sociology.

[Unesco Features, February (II), 1968.]

### 36. **Satellite Broadcasting and Education : The Prospects**

(By Wilbur Schramm, Director of the Institute for Joint Communication Research, Stanford University.)

No use of modern communication has so interested the planners in developing countries, and other individuals and groups concerned with economic and social development, as the possibility of using satellite broadcasting in support of education.

The possibilities are indeed attractive. For countries where well-trained, well-educated teachers are in short supply, there is the chance to share the best teaching widely. For countries where schools are short of teaching aids, there is the chance to distribute audio-visual materials and demonstrations from central places. Where special courses or special kinds of instruction are needed, there is the chance to produce it in one place and distribute it to many. Teachers can have access to continuing in-service training without having to go back to college for it. Where schools do not exist, education can still be carried out by broadcast and correspondence study. Where literacy classes are needed, basic material can be offered by broadcast or films, and a monitor not specially trained for literacy teaching can conduct the class. Broadcasts in support of rural forums, teleclubs, village level workers, or agricultural extension, can help impart needed knowledge of



health, agriculture, or community development. And in all these uses, modern communication can help to broaden the perspective of its users—beyond the State, beyond the nation—and implant ideas of how other people live, of the national plan and purpose, and of the changes under way.

**Reaching a Larger Area.** In developing educational systems, modern communication has most often meant radio, television and films. These have included, for example, television and radio in schools (as in Samoa, Niger, Colombia, Thailand), radio in combination with rural forum groups (India and Togo), radio or television combined with correspondence study (Australia and Japan), television with literacy study groups (Italy and the Ivory Coast), and teacher training programmes in many countries. Projects like these have attracted wide attention and whetted appetites. And because television and radio have played such a large part in all of them, the question has inevitably been raised whether a communication satellite could not do better, and perhaps more cheaply, over a far greater area, what direct radio and television have done in limited areas.

Communication satellites are presently in the first stage of what is expected to be three stages of development. This is the period of *point-to-point communication*, wherein a satellite of relatively low power retransmits a signal from a powerful ground transmitter to an extremely sensitive ground receiver. Both the receiving and transmitting ground stations of this type cost several million dollars, and their use will be therefore limited to connecting existing ground communication systems. For example, the North American telephone system is presently connected by the Intelsat satellites to the European telephone system; and a television programme prepared in Moscow may be carried by the Molniya satellites and rebroadcast in Vladivostok.

**Distribution Satellites and Direct Broadcasting.** The second stage of satellite communications will involve the use of satellites of a higher power which will be able to serve less sophisticated receiving stations, costing perhaps \$100,000 or less. These so-called *distribution satellites* will thus be able to feed television to local broadcasting stations, so offering an alternative to microwave or long lines.

The third stage is expected to be *direct broadcasting*, when much more powerful satellites (working at the level of several kilowatts, as against the few watts of the first point-to-point satellites) and something of the order of 50 watts for the distribution satellites) will be able to broadcast television or facsimile directly to home receivers. Though these direct satellites could technically be available in about 5 years, they are in fact unlikely to come into use before around 1980.



If a distribution satellite could be used in the service of education in a developing country, it would, in effect, take the place of microwave links or long lines to local stations, and the country could, for the time being, forego that expenditure. If the whole country could be served by direct broadcast, it would be possible to leap over the stage of building local stations.

A considerable part of the ground cost, however, could not be avoided in any case. Receiving sets and antennae would be needed. In Samoa, to take one example, it was found that new schools had to be built before television could be effectively introduced. For any large country, the cost of the ground segment would probably be considerably more than that of the space segment. And the annual operation of the ground segment would be very much more than that of the space segment: it would include the programming and maintenance, the very extensive arrangements for co-operation and liaison between schools and programme centres, and the materials to accompany the broadcast instruction.

Just as television is a mass medium and has to be used in a large way if unit costs are to be acceptable, so a communication satellite is a very large telecommunication system which has to be used to serve a great area lest the unit costs be out of reach. "A little" use of a satellite system for education and economic development is therefore not a reasonable policy for a developing country. Any such use involves a major investment in money, manpower and technical resources.

This is not to say that such an investment is not justified. Rather, the point we are trying to suggest is that it is probably justified for some countries, under some conditions, at some stage of development.

One of the touchstones is the size of the country. For unit costs to be favourable, in comparison with other ways of delivering a signal, the country must be a very large one—perhaps something of the order of a million square miles in area—or the satellite must be used to serve a co-operating *group* of countries. For educational use of a satellite, however, this raises the question of local needs and patterns of education.

**The Problem of "Localness".** One of the essences of education is localness—individual differences among students and consequently different needs for instruction: local class schedules and local curricular patterns: differing content of courses based on local interests, surroundings and occupational goals; differences in standards of accomplishment between schools or regions; different customs; sometimes different languages. These differences are much greater in some countries than others; in France, for example, there is greater uniformity of curriculum and standards than, for example, in the United States. The same problem carries over to adult



education and development information. For example, dry wheat farmers will be very little interested in the kind of advice to be given to wet rice farmers ; the fishermen of Kerala would gain little from instructions broadcast to Rajasthan about the diseases of camels.

Therefore, any country thinking of a satellite for educational uses must ask what material can profitably be broadcast to the *entire region* served by the satellite, or what division of satellite time or of satellite channels (if it has more than one) would meet the different needs of different parts of the region. If a group of countries plan to use the satellite together, they must ask the same question in *terms of their differing needs*.

Where television has been used for education, it has been found that a great deal of its effectiveness depends on the kind of activity that is stimulated at the receiving end. Learning activity is stimulated in part by the broadcast, and in part by the classroom, teaching or monitor. In many of the most successful television projects the classroom teacher performs as a true partner of the studio teacher ; in fact, it becomes a kind of team teaching, in which the television teacher does a part of the job, and the classroom teacher another part. To accomplish this, both teachers must learn new roles. The feeling of being on the same team comes usually from common planning, or from very close liaison and constant feedback from the schools to the studies.

**International Co-ordination.** This kind of problem will be even more demanding when a satellite is put into the communication chain. At the very least, therefore, educational use of a satellite would require very careful and skilful administrative planning, a considerable effort to assist the classroom teacher to learn her new role, and a large staff of field workers to maintain contact between central administration and programming, and the schools and classrooms. In a country large enough to use a satellite expeditiously—that is to say, a country like India, Indonesia or Brazil—that field staff would probably number in the thousands. For adult education the broadcasts would have to be combined with a field staff and organization even larger—perhaps something of the order of India's 35,000 village-level workers. If a group of countries use a satellite for education, they will almost certainly need an international organization to plan and coordinate programmes and provide for liaison with users.

[Unesco Features, No. 518, January (I), 1968.]

### 37. Primary School Children's Own TV Studio in U.K.

The pupils of Holmesdale County Primary School at Reigate in Southern England now have their own television studio. Built with the help of parents, friends and local firms, the studio is housed



in what used to be a playground shelter. Equipment consists at present of two small television cameras with zoom lenses, an amplifier and a five-way mixer.

The studio is used for the children's own programmes, as well as for lessons. For instance, they are helping to plan and produce a regular magazine programme which includes such items as a performance by the school's resident magician (aged 10), a critical discussion of two new books by a boy and a girl with a children's librarian in the chair, and so on.

The staff, all of whom are involved in one way or another, benefit from the studio as well : its use for lessons transmitted to the various classrooms gives them much greater flexibility as well as a powerful new teaching aid.

[Unesco Features, November (II)/December (I), 1967.]

### **38. Unique Collection of School Textbooks**

The Library of the International Bureau of Education (IBE) in Geneva has a collection of more than 25,000 school textbooks from 110 different countries. It is believed to be the only collection of its kind in the world.

Recently, the Library had an exhibition of about 100 textbooks written for African schools, and will shortly hold a display of programmed textbooks.

[Unesco Features, November (II)/December (I), 1967.]

### **39. TV Brings Results in Senegal**

In July 1964, the West African nation of Senegal came to an agreement with Unesco to set up a small experiment in the use of television, along with radio and cinema, for adult education. The aim was to find out, under African conditions, whether television could in fact educate adults, and what the best programme techniques were for imparting knowledge and influencing behaviour. The experiment is to last six years. Other African governments will be kept in touch with the findings obtained. Unesco hopes that these findings will help African networks engaged in adult education to avoid costly mistakes and to attain their objectives more easily.

The transmitter, a tiny one of 50 watts, is situated in Dakar, the capital of Senegal. The range of the transmitter is about 20 miles. This is enough to enable the programmes to reach all of the city and suburbs and some of the countryside beyond. There are only 13 receiving sets, but they have been carefully situated in contrasting areas of Dakar and the outer suburban communities. Since each set serves a 'teleclub' of some thirty members, the total audience



numbers about four hundred. The programmes are all in the vernacular, Wolof.

**An Audience of Women.** An early decision was to limit the first year's programmes to an audience composed of women. Even in Dakar, an overwhelming proportion of women are illiterate—84% of the audience had either never been to school or had had only a few terms of primary school. In view of the known priorities, it was further decided to transmit two programmes a week; one on general health, the other on nutrition. The women were organized into clubs, sometimes based on existing social groups, but mostly formed spontaneously from the streets surrounding the building where the television set had been installed. In many cases, a government 'animator', a person responsible for encouraging group action, was attached to the teleclub.

During the early months, the programme devisers were constantly raising and lowering their sights, trying to gauge how best to transform technical medical knowledge, say, into understandable television programmes, how to use the vernacular language to convey this kind of knowledge, and above all how to 'pace' the rate of instruction. They found that, to begin with, they were *under*-estimating the women's powers of absorption. The programmes were too simple and too slow. Then there came a period of going to the other extreme—technical accounts of cell structure or digestive processes, which were too remote from the women's mental habits. The lesson they finally learned was that two things have to be combined: a strong educational 'line', and a fresh, interest-catching form.

In the health series, the government's priorities dictated that two subjects should predominate: the dangers resulting from bad sanitary habits; and infant mortality, which, in Senegal's case, is closely linked to weaning customs. Accordingly, a high proportion of the programmes were devoted to these two matters under various forms. In the nutrition series, it was the problem of protein deficiency which needed the most emphasis.

**'Before' and 'After' Surveys.** Before and after the first year's transmissions, the University of Dakar conducted surveys to determine the effects of the programmes on the women of the viewing public. One of the major transformations was an unexpected one. In the 'before' survey, the women were asked to give their views on the causes of dysentery, to choose one example: 44% gave an adequate explanation, 3% an erroneous one, but a full 53% could not be drawn into giving any explanation at all. During the year, there were two programmes which dealt with dysentery. In the 'after' survey, 78% of the women gave an acceptable explanation of the causes, 16% an erroneous explanation, and the "wouldn't say's" were down to a slim 6%. The same phenomenon recurred with all the other questions. So the conclusion was that, apart from



anything else, the programmes and the discussions in the teleclubs which followed them had broken down inhibitions barring self-expression, and that the women were being awakened to their right to speak out and assert themselves.

When it came to the imparting of knowledge, the programmes on weaning a baby scored the most impressive success. Only 25% of the women in the 'before' survey said they weaned their babies before the age of eighteen months. Nutritionists say that if babies are not removed from the breast and given a diet including solid food by this age, they are likely to suffer from severe, even fatal, nutritional disorders. 20% of the women weaned between 18 months and 2 years, 29% between 2 and 3 years, 12% after 3 years, while 14% did not answer. About six or seven programmes during the year treated various aspects, nutritional and psychological, of the dangers of late and abrupt weaning. The specialists recommended that weaning should be gradual and should be completed by the age of one year. The 'after' survey was very heartening. A full 59% now said that weaning should be complete by the first year. 21% favoured between 1 year and 18 months, a mere 4% between 18 months and 2 years, *none at all* after 2 years, and 6% gave no reply. It has not been possible so far to check on whether this knowledge has been translated into changed behaviour but, in almost all the subjects treated on television, there has been a similar success in at least imparting information.

**Increased Audience Participation.** In the second year, the emphasis was switched from this kind of precise instruction to domestic and social subjects, with a big increase in audience participation. The idea was to experiment with television less as a means of education (this point having been well proved) than as a focus for group activity. Quizzes, programmes devised and enacted by teleclub members, civic instruction, general knowledge, household budgeting—these were some of the subjects that went on the air during 1966.

[Unesco Features, November (I) 1967.]

#### 40. Travelling Record Library Aids Literacy Teachers

In Venezuela, the Department of Adult Education has designed a special travelling record library as an auxiliary for literacy training containing 800 battery-powered record-players and 5,000 LP records. A set of five of the records with their accompanying booklets makes up a complete course of 40 six-minute lessons specially designed for training literacy teachers.

[Unesco Features, October (II), 1967.]

#### 41. A New Style in Science Education in Israel

It is, perhaps, only natural that a very young scientific institution in a very young country should be concerned not only with the



quality of its own work, but also with the calibre and standards of its scientists-to-be. The Weizmann Institute of Science in Rehovoth, founded some thirty years ago by Israel's first President, Dr. Chaim Weizmann, and staffed today by nearly 500 research scientists whose average age is still only forty, has made a considerable contribution to the science-consciousness of Israel's youth.

Operating on the assumption that science can be fun, and stressing direct contact with Institute scientists, the Weizmann Institute's Science Summer Camps have set a new style in science education. Partly supported by the Youth Division of Israel's Ministry of Education and Culture and by various private donations, the camps bring some fifty boys and girls every year from all over Israel to the Institute campus for a 12-day stay. On campus, the young people live in airy reed huts specially put up for their use in the midst of a pine grove; and from these gay holiday headquarters, daily contact is made and maintained between them and between the "grown-up" researchers, contact formed by living together and by actual working sessions organized in laboratories and lecture halls.

Four main groups are set up: Biology, Chemistry, Physics and Mathematics. In each of these fields, the children learn what scientific methods really are, how experiments are designed and carried out, and in the process of doing actual scientific work, they learn to understand and to value the scientific approach.

Mornings are spent in learning by doing, afternoons and evenings are given over to sports, entertainment, picnics, hikes and discussions.

Each year, for the past four years, the number of applicants has grown, but the limited space available in Institute laboratories has made it impossible to accept all or even most of them. Recently, and as a result of the Institute's initiative, similar camps have been organized at two other leading Israeli scientific and educational institutions.

Another activity, new to Israel, and directed towards much the same goals as the Science Summer Camps, is the Science Models Contest of which five have already been held at the Weizmann Institute. Geared to secondary school students, the Model Contest calls for the creation of models or the writing of research reports which illustrate basic scientific principles either in mathematics or in the natural sciences. The models, of course, must be home-made and accompanied by clear explanations of what they are intended to illustrate and how they work. Interesting models and research papers have been submitted: one, a model of an accelerator and an integrator for inertial navigation, was turned in by a 17-year old boy the year before last. Last year, he submitted an even more remarkable entry—a working digital electronic computer. The models are displayed at the Institute for a week. Prizes are awarded



during the winter holidays when a series of lectures are given by the Institute's senior scientists for high school students, who are also shown around the Institute and given a chance to applaud the Models Contest winners. Like the Summer Camps, the annual lectures, which are sponsored by the Israel Association for the Advancement of Science, not only sustain scientific interest in talented youngsters, but also actually create a bridge between what goes on in the classroom and what the future may hold for those children who will have to provide Israel with a solid core of new scientific talent.

Less direct contributions (but in the long run more important ones) are made by Weizmann Institute scientists helping to revise the teaching of mathematics and the natural sciences in Israel's high schools and acting as part-time volunteer science supervisors of Israel's educational TV programmes. The most modern textbooks, used widely in the United States to teach chemistry, physics and mathematics in new ways, have been adapted and translated by teams of Weizmann Institute scientists working in close co-operation with the Ministry of Education. Experimental teaching equipment is tested and its use discussed and explained at seminars of science high school teachers; the creation of efficient and relatively inexpensive school labs., using everyday materials for the design of striking experiments, and assistance in the planning of curricula are all part of this adventure in teaching.

And to provide the general public with better access to news from the scientific front, the Institute has launched a special course for science writers, attended by dozens of young journalists interested in the communication possibilities of this increasingly important area of journalism.

[Unesco Features, No. 512, October (I), 1967.]

#### 42. **World Bank Aids Education in Madagascar**

The World Bank has approved a loan equivalent to \$4.8 million to the Malagasy Republic to help finance the relocation and expansion of three secondary technical institutes and two teacher-training institutes in Tananarive, the capital. The expansion will enable the combined enrolment of the schools to be increased from 1,350 to 3,110, and the concentration of the five schools on one site will make possible the sharing of various communal facilities.

A major limitation to the expansion of commerce and industry in Madagascar at present is the shortage of trained manpower at the technician level: a Unesco survey in 1963 found only 38,000 salaried skilled workers in a total population of 6 million. The expansion of the three institutes will make possible significant increases in the numbers of such middle-level personnel in engineering,



ing, building trades, surveying, office work, hotel-management and domestic science.

[Unesco Features, August (II)/September (I), 1967.]

#### **43. New York Lottery Proceeds for Education**

New York State has embarked on its first legal public lottery and all the proceeds will go to swell the State's education budget. Prizes of up to \$100,000—\$250,000 once a year—will be given, and some 30 million tickets are expected to be sold every month.

[Unesco Features, July (II)/August (I), 1967.]

#### **44. School-Size Computer Developed in Germany**

A new experimental electronic computer for use in schools has been developed by a German firm. Its aim is to make a game of learning the fundamentals of programming computers.

The advantage of this school-size computer, called the Simulog, is that the pupils themselves can compile an infinite number of logical plans and programmes. They can thus learn the construction, function and operational methods of data processing units. The Simulog is built on the unit system and can be put together by the children themselves according to the required programme.

[Unesco Features, July (II)/August (I), 1967.]

#### **45. Latest Equipment Helps Blind Children to Learn**

A special school for blind children in London is making experimental use of devices and techniques which offer new possibilities for learning by the handicapped. An audio light probe that emits a signal can help blind children distinguish between dark and light colours: the sound signal varies as the probe is passed over materials of varying intensities of colour, and with practice the children can tell the difference. A height indicator with a light probe enables the students to measure structures such as buildings: when the angle of the indicator is lined up with the top of the building, the pitch of the probe's signal changes. The students can then make scale drawings of the buildings using braille geometry on a plastic sheet.

[Unesco Features, July (I), 1967.]

#### **46. Learning Languages in the Air**

Transatlantic passengers on one airline can now familiarize themselves with French, German, Italian or Spanish while en route to Europe. The audio-visual method of instruction, recently developed for Trans World Airlines, comprises a repeated programme of frequently used words and phrases on continuous tape,



and an accompanying booklet listing these phrases, plus information on currency, tipping, shopping, restaurants and entertainment. The taped programme is an hour in duration, and can be repeated in full.

[Unesco Features, June (I) 1967.]

#### 47. **Lottery to Finance Scholarships**

The Israeli National Lottery, which in the past has provided funds for the construction of schools and hospitals, will soon offer a certain number of scholarships to students of the Hebrew University of Jerusalem.

The first of these scholarships, valued at 6,000 Israeli pounds, will permit seven students to publish their doctoral theses: two on Afro-Asian studies, two on archaeology and three on bacteriology, biochemistry and Hebrew literature, respectively.

[Unesco Features, May (I), 1967.]

#### 48. **Learning by Telephone**

Lectures and language courses are being given by telephone in the State of Wisconsin, USA. By means of amplifying devices supplied by the telephone company groups of students in different places are enabled to follow the class or lecture and ask questions.

The method was introduced by the University of Wisconsin Extension Division to improve and expand opportunities to people to learn, while reducing the costs of transporting instructors.

Young people in 28 different high schools are learning five foreign languages by a combination of correspondence study and telephone classes supplied by the University. By the same technique 200 doctors in 18 different hospitals have been following a 24-week course of instruction from the University's medical centre. Eight to ten hospital "classes" are on the circuit at the same time, and each hears questions asked by the other groups and the answers the lecturer provides.

[Unesco Features, February (I), 1966.]



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